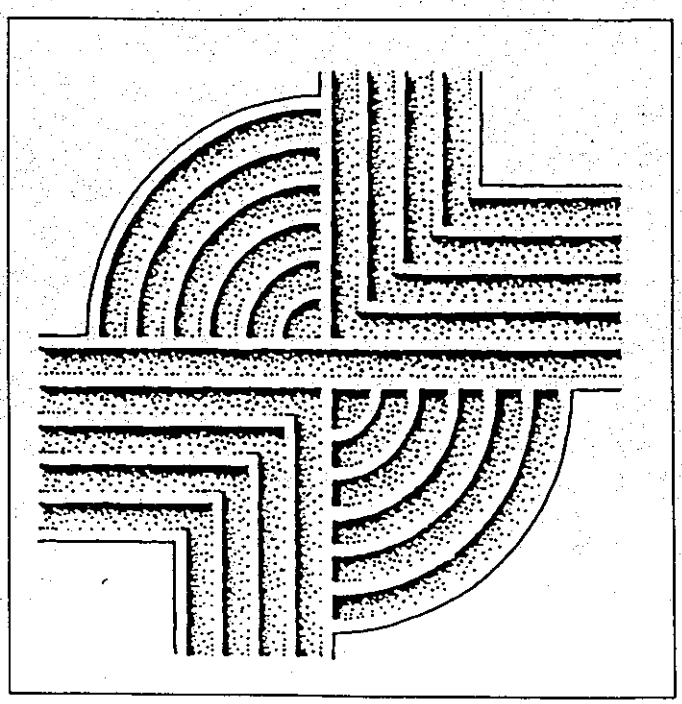
CULTURAL RESOURCES SURVEY OF THE PROPOSED FORK SHOALS ENERGY PROJECT SITE, GREENVILLE COUNTY, SOUTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 337

CULTURAL RESOURCES SURVEY OF THE PROPOSED FORK SHOALS ENERGY PROJECT SITE, GREENVILLE COUNTY, SOUTH CAROLINA

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Chicora Research Contribution 337

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ABSTRACT

This study reports on an intensive archaeological and cultural resources survey of approximately 98 acres of land to be used for the Fork Shoals Energy Project site in the southern portion of Greenville County, South Carolina . The work was conducted to assist Environmental Consulting and Technology of Gainesville, Florida comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The tract is bordered by SC 418 to the north and by Woodside Road (C-18) to the west, except for an outparcel on its extreme southern end. The eastern edge is defined by an unnamed tributary of the Reedy River. While the northeastern property line is seemingly arbitrary, it roughly follows another drainage. The tract consists primarily of a ridge saddle in the northeast corner, drainages in the northwest corner and along the eastern edge, while the major portion of the tract encompasses a large ridge knoll. Today the area is thickly wooded, except for some remnant agricultural fields in the south half of the parcel. A major steel tower transmission line runs east-west in the southern third of the tract, while an H-frame wood pole line runs southwest-northeast along the southeastern edge.

The tract is to be used for the construction of a natural gas-fired electric generation facility. Since the plans are in a preliminary stage it isn't possible to provide specifics of construction, but such plants do incorporate one or more tall stacks for the exhaust gases and these towers, in conjunction with high voltage transmission lines are often considered to be defining features.

The proposed plant site will require the clearing, grubbing, and grading of the area, followed by construction of the proposed facility. Given the topography of the tract, it is likely that most of the construction will be focused on the high ground areas in the west central portion of the parcel, but no design plans are available.

Regardless, these activities have the potential to affect archaeological and historical sites and this survey was conducted to identify and assess archaeological and historical sites which may be in the project area. For this study an area of potential effect (APE) 1.0 mile around the proposed substation was assumed. It should be noted that the area is currently affected by two existing transmission lines. Otherwise the area is generally rural, although a number of modern developments are being constructed just north of SC 418 and these are dramatically altering the character of the region.

Consultation with the S.C. Department of Archives and History revealed no previously identified NRHP sites within the 1.0 mile APE. Nor were there any previously surveyed architectural sites, although a brief reconnaissance in 1985 identified one structure and the Battle of Great Cane Break in the APE. The 1995 Chicora cartographic study incorporates these sites, as well as several additional bridge sites.

An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology revealed no archaeological sites within the 1.0 mile APE.

The archaeological study of the tract incorporated shovel testing at 100-foot intervals along transects placed at 100-foot intervals within the proposed study area. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. A total of 431 shovel tests were excavated along 27 transects in the survey tract. No archaeological sites were identified as a result of these investigations, although one isolated find of a quartz biface was recovered. The absence of archaeological sites is likely associated with the steep slopes and heavy erosion found on the

project tract.

A survey of public roads within 1.0 mile of the proposed undertaking was conducted in an effort to identify any architectural sites over 50 years old which also retained their integrity. Only two structures were identified. Structure 4771247 is a ca. 1920 I-house situated in the general area identified during the SHPO architectural reconnaissance. The structure's integrity has been affected by the addition of synthetic siding and the house is no longer considered individually significant and not eligible for inclusion on the National Register.

Structure 4771248 is a L-shaped ca. 1890 house with a hip roof. Architectural detailing includes an elliptical fanlight, a porch with a decorated cornice, entablatures with designs in the frieze above the first floor windows, and the cornice lines of the main roof have a wide divided band of trim. In spite of these surviving details, the house has been covered in synthetic siding and the windows have been replaced. Consequently, this structure is also recommended no longer eligible for inclusion on the National Register.

Finally, it is possible that archaeological remains may be encountered in the corridor during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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INTRODUCTION

This investigation was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Ms. Lisa Ricker of Environmental Consulting & Technology, Inc. (ECT) of Gainesville, Florida. The work was conducted to assist ECT and their client comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project consists of a tract of land measuring approximately 98 acres, situated in the southern portion of Greenville County about 6 miles southwest of Fountain Inn and 13 miles southeast of the City of Greenville. The closest community is that of Fork Shoals, about 2.5 miles to the southwest (Figure 1). The proposed tract is bounded by SC 418 to the north and Woodside Road (C-18) to the west. The eastern boundary is the run of a small intermittent drainage of the Reedy River. While the northeast boundary is essentially arbitrary, it closely follows another drainage to the northwest (Figure 2).

The southern third of the tract is bisected by a 200-foot wide Duke power transmission easement with steel towers. Cutting southwest-northeast across the southern tip of the property is a 68-foot wide Duke corridor with H-frame wood poles. The area surrounding the study tract is rural, although there are five residences on the tract, bordering Woodside Road, one of which is an out parcel not included in this study. To the north of SC 418 there are a number of modern subdivisions constructed or being constructed. These will likely have a significant affect on the rural nature of the study area.

The study tract is characterized by a drainage in the northwest corner, at the intersection of SC 418 and Woodside road, as well as a drainage on the southeast, east, and northeast sides. A ridge saddle is found to the north, while the west central and central portion of the tract consists of a ridge knoll with steep slopes to northwest and locally steep slopes to the west. The area is densely wooded except for an area under the powerlines and a small remnant agricultural field in the south central portion of the study area. While surrounded by drainages, at the time of the survey the only flowing drainages were those along the eastern edge of the tract (draining south and west into the Reedy River) and a second small tributary in the northwest corner of the parcel (draining west into the Reedy River).

The proposed tract is intended to be used as a natural gas fired power generating station. Such plants are typically located in close proximity to natural gas pipelines, electrical transmission lines, and a water source. Natural gas is used to convert water into steam, which is used to operate turbines that generate electrical power. Construction effects are anticipated to include clearing, grubbing, grading and filling, construction of utilities, and construction of the plant facilities. The construction process itself is likely to increase traffic, dust, and noise levels in the plant area, at least in the short-term. These activities, combined with on-going maintenance, will cause extensive damage to the ground surface and any archaeological resources which may be present in the survey area.

Construction, operation, and maintenance of the substation may also have an impact on historic resources in the project area. Although the project will not remove any structures, the facility will have one or more stacks which may detract from the visual integrity of historic properties, creating what many consider discordant surroundings. As a result, this architectural survey uses an area of potential effect (APE) about 1.0 mile in diameter around the proposed facility.

This study, however, does not consider any future secondary impact of the project, including increased or expanded commercial or

Figure 1. Project vicinity in Greenville County (basemap is USGS South Carolina 1:500,000).

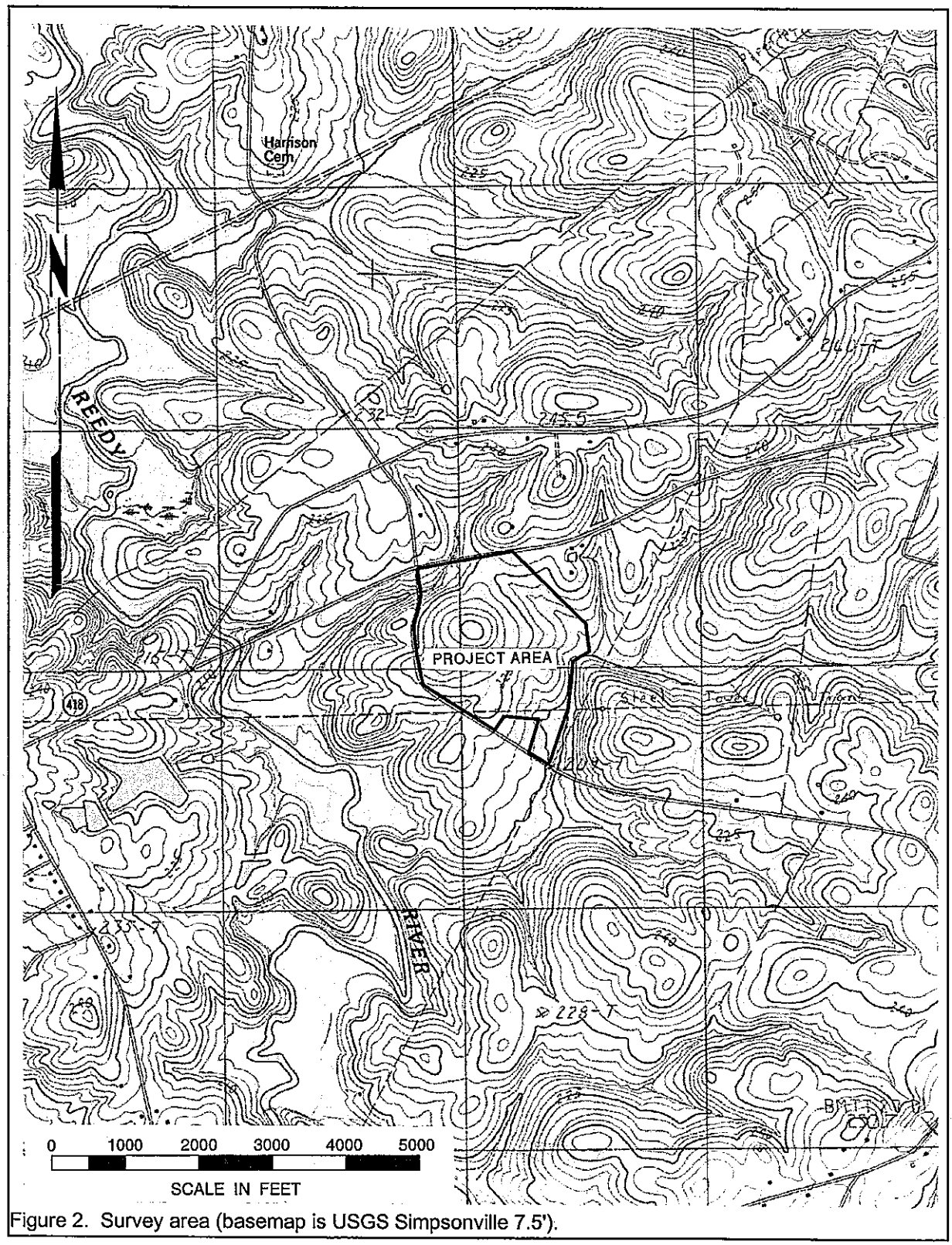

Figure 2. Survey area (basemap is USGS Simpsonville 7.5').

industrial development of this rural (albeit developing) section of Greenville County. Nor does this study incorporate any transmission line modifications which may be necessary for the project.

We were requested by Ms. Lisa Ricker of ECT, Inc. to prepare a technical and cost proposal for the project on June 14, 2001. This proposal was accepted and an agreement for the investigations signed on August 6.

Initial background investigations incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology by Chicora Foundation. As a result of that work, no archaeological sites were found within the APE, although several were identified just outside the 1.0 mile boundaries to the west.

In addition, the South Carolina Department of Archives and History GIS was consulted to check for any NRHP buildings, districts, structures, sites, or objects in the study area. No NRHP sites were found within a mile of the survey, nor did the background check reveal any previously recorded architectural sites in the project area. There is one South Carolina Highway Historical Marker within the APE. Number 23-3, situated on S. Harrison Bridge Road about 0.5 mile north-northwest of the survey tract, commemorates the Battle of Great Cane Brake. In addition *A Heritage Resources Management Plan for Greenville County, South Carolina: Our Gift to the Future* reveals four potential historic sites in the APE, including two bridges, a structure, and the Great Cane Brake battle site (Trinkley et al. 1995).

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files.

The archaeological survey was conducted on August 15-17, 2001 by Mr. Tom Covington and Ms. Nicole Southerland. The architectural survey of the project APE was conducted at the same time Dr. Michael Trinkley. Report production was conducted at Chicora's laboratories in Columbia, South Carolina from August 20-21, 2001.

NATURAL SETTING

Physiography

The Fork Shoals Energy Project is located in the southern portion of Greenville County about 6 miles southwest of Fountain Inn and 13 miles southeast of the City of Greenville (Figure 1). The bulk of Greenville County falls within the Piedmont Physiographic Province (although the northern one-quarter is found in the Blue Ridge Mountains).

The general slope of the terrain is southeastward, which is the general direction of the major drainages within the County, such as the Reedy River which flows through Greenville and is found less than a half mile west of the project tract. The eastern and northwestern edges of the tract are defined by tributaries of the Reedy River, which flow south and west, while another tributary cuts into the northwestern corner of the parcel.

The land ranges from nearly level to steep, but most areas are gently sloping to moderately steep. Like elsewhere in the Piedmont, the drainages form a dendritic pattern and throughout the Piedmont the terrain has been extensively dissected and degraded.

Elevations range from about 750 to 850 feet above mean sea level (AMSL) in this portion of the county, although in the Blue Ridge Mountains to the north elevations range up to nearly 3,300 feet AMSL. Being in the upper central Piedmont, although before the Blue Ridge, elevations in the project area range from about 700 to 785 feet AMSL. The highest elevations are in the central portion of the tract on a significant ridge knoll and slope down to drainages to the northeast, east, and northwest.

The southern third of the tract is bisected by a 200-foot wide Duke power transmission easement with steel towers. This easement gently slopes east from Woodside Road at the western property border and then more steeply drops into a narrow floodplain associated with the unnamed creek which forms the western property boundary. Cutting southwest-northeast across the southern tip of the property and this floodplain is a 68-foot wide Duke corridor with H-frame wood poles. The area surrounding the study tract is rural and consists of rolling topography, although there are five residences on the tract, bordering Woodside Road. As previously mentioned, one of these is an out parcel not included in this study.

Figure 3. Powerline easement crossing the southern third of the survey tract.

Figure 4. Steeply sloping drainage area in the northwest corner of the survey tract along SC 418.

Geology and Soils

Most of the rocks of the Piedmont are gneiss and schist, with some marble and quartzite (Haselton 1974). Some less intensively metamorphosed rocks, such as slate, occur along the eastern part of the Piedmont Province from southern Virginia to Georgia. This area, called the slate belt, is characterized by slightly lower ground with wider river valleys. Consequently, the slate belt has been favored for reservoir sites (Johnson 1970). In Greenville County there are eight geologic formations ranging from alluvium recently deposited on the floodplains through fine-grained rocks which are diabase dikes that cut across formations of granite and gneiss to coarse-grained rocks such as muscovite pegmatite dikes. This geologic diversity promotes both floristic and topographic diversity, although in the project area relatively little of this diversity is immediately apparent.

Soils in the project area are classified as the Cecil-Pacolet Association, which is dominantly strongly sloping to moderately steep and well drained. Four distinct series are found in the study tract — Cataula, Cecil, Louisburg, and Pacolet soils — although considerable variation is observed on the ground.

Figure 5. Pine forest with road showing exposed clay subsoil common on the tract.

The Cataula soils have slopes on the survey tract ranging from 2 to 10% slopes, although all of the soils are classified as eroded. This soil is found on narrow ridges and side slopes adjacent to drainages. In the study area the soil tends to be found along the western edge, in the northeast corner, and toward the southern edge of the parcel. Even the less steeply sloping areas exhibit rills and shallow gullies. The representative profile of this series contains an Ap horizon about 0.4 foot in depth of dark brown (10YR4/3) sand loam over 0.1 foot of strong brown (7.5YR5/6) sand clay loam, grading into a red (2.5YR4/6) clay. Camp (1975:11-12) observes that 20 to 30% of the area exhibits a surface layer of yellowish-red sandy clay loam, resulting from the erosion of the Ap horizon, while another 20-30% reveals a surface layer of reddish clay loam, resulting from the loss of both the Ap and B horizons.

The Cecil soils on the tract are confined to a relatively small area on the southwestern edge, where Cecil clay loam, 6-10% slope soils are found. These are characteristic of long ridgetops and shallow gullies are common. While the typical Cecil soil may have an Ap horizon 0.5 foot in depth of dark brown (10YR4/3) sandy loam overlying 0.2 foot of yellowish red (5YR5/6) sandy clay loam, with a subsoil of red (2.5YR4/6) clay, these sloping soils generally have a surface layer of clay loam, evidencing the loss of the original A horizon soil.

The Louisburg series is found on sloping to steeply sloping areas on breaks above drainages. In the study tract these soils are confined to one small area adjacent to Woodside Road. Classified as sandy loams occurring on 6-15% slopes the soil rarely contains its A or Ap horizon of dark grayish brown (10YR4/2) loam sand and instead the surface soil is a pale brown (10YR6/3) sandy loam overlying a light yellowish brown (10YR6/4) saprolite subsoil.

The last series found in the study tract is the Pacolet. Occurring as both clay loams on 10-15% slopes and sand loams on 15-25% slopes, these soils are most commonly encountered in the central portion of the study area. Camp (1975:24) observes that these soils are found on strongly sloping areas adjacent to creeks. The typical Pacolet profile reveals an Ap horizon 0.6 foot in depth of brown (10YR5/3) sandy loam over a red (2.5YR4/6) red clay. On the more steeply slopes aspects, the Ap horizon has been lost and red clay is exposed at the surface. Camp notes that gullies are common.

In the early nineteenth century Robert Mills observed that Greenville County soils were:

> various, embracing the sandy, clayey, gravelly, and stony character. Its productiveness is regulated by circumstances of position and culture; most of the land being capable of yielding a generous product in proportion to the industry bestowed by the cultivator. It is well adapted to the culture of all the small grains and corn . . . . The quantity of wheat produced to the acre, averages about 12 bushels; of corn 25 bushels; of clean cotton 125 pounds per acre (Mills 1972:572 [1826]).

As discussed in more detail below, this was an area of yeoman farmers who placed little pressure on the soils during the early nineteenth century. Prior to the Civil War, however, the population increased, transportation improved, and cotton began to be planted in earnest. With cotton came, for the first time, abandonment, erosion, and gullies.

By 1859 John Logan remarked that the Enoree River, separating Greenville and Spartanburg counties, "is now a turbid stream discolored by the dissolving clay of a wasted soil" (Logan 1859:237). After the Civil War cotton was seen, more than ever, as the only salvation of the Southern farmer. Between 1870 and 1880 the acreage of tilled land doubled in the area just below the Blue Ridge. After 1900 erosion became acute because of rising cotton prices which culminated in the agricultural "war boom" during World War I. By 1910 what virgin land remained, even in steep areas, was being cleared for cotton cultivation.

These agricultural practices brought the same disastrous soil loses in this region as already experienced in other sections of South Carolina. Lowry (1934) found significant portions of Greenville County suffering from severe sheet erosion and occasional gullies. Trimble found nearly 0.9 foot of soil had eroded off most of Greenville County, largely as a result of postbellum cotton farming (Trimble 1974:15). A study of erosion in the vicinity of the Spartanburg Municipal Reservoir Watershed, located on the South Pacolet River about 13 miles north of Spartanburg, provides some comparative information since both Spartanburg and Greenville counties suffered similar erosional histories. The authors of the study remark that:

> nearly all the land in the watershed has been affected by erosion or erosional debris. . . . A little more than 17 percent of the land has been severely or very severely eroded, having lost at least three-fourth of the surface soil [estimated to be from 8 to 36 inches of soil loss] or slightly less than three-fourths of the surface soil from areas with frequent gullies. Slightly more than 42 percent have been affected by erosion designated as moderate to severe. Damage has been most severe on the cultivated Cecil soils on slopes of 7 percent and over. Erosion is moderate to severe, severe, or very severe on 88.6 of the cropland (Bass and Martin 1940:12).

It is ironic that the crop which made textile mills hum was the same crop which depleted the soil, forcing farmers off the land and into the mill.

Climate

In the nineteenth century Mills described the climate of Greenville as:

> as one of the most delightful in the world. The lands are well drained, and the major part sufficiently far removed from the mountains, not to be affected by the vapors; yet near enough to partake of their refreshing coolness in summer, and protection from the cold northern blasts in winter (Mills 1972:575 [1826]).

Indeed, most of Greenville County does have a temperate climate characterized by mild winters and warm summers, at least by our standards. Winter temperatures, however, frequently hover between the low fifties and freezing, while in the

Figure 6. Hardwood scrub found on slopes in the survey tract.

Figure 7. Broad, low area on south edge of the survey tract.

summer temperatures will frequently be in the upper 80s to mid-90s. With nearly 3000 heating degree days[1], Greenville can be considered cold, especially if you are in a poorly constructed, uninsulated wood frame house.

During the fall, winter, and spring the weather is controlled largely by the west to east motion of fronts and air masses. Air exchanges are less frequent in the summer and maritime tropical air can persist in the region for relatively long periods -- giving rise to very warm, humid days. Precipitation is well distributed throughout the year and averages around 50 inches, adequate for a wide range of crops. For most of Greenville County the average growing season is between 210 and 220 days.

Floristics

Piedmont forests generally belong to the Oak-Hickory Formation as established by Braun (1950). Most common are white oaks, black oaks, and red oaks, although a wide range of additional species may be found, including hickories, loblolly and shortleaf pines, black gum, and sweetgum. In low areas beech, ash, hickories, and birch may replace the oaks and at the water's edge there may be willows and alders. The Piedmont diversity is largely related to variations in the moisture content and fertility of the soils. Barry, expressing the attitude of many, remarks that:

> the present aspect of piedmont landscape has doubtless come about as a result of one or more erosion cycles. These cycles have left us with an area as complex as anyone would like to make it, yet an area which, for a layman's viewpoint, is relatively unimpressive (Barry 1980:61).

Mills, in the nineteenth century, remarked that Greenville had "short leafed pine, popular, chestnut, white, red, and Spanish oak, some curled maple, black walnut, and wild cherry" (Mills 1972:574 [1826]), suggesting that the vegetation has remained relatively stable for the past several hundred years.

Vegetation within the project area today consists of thick, knee high grasses such as broomsedge, and briars on the cleared powerline easements. There is also an area of Louisburg and Cecil soil which was previously under cultivation, but today is fallow with high grass. The remainder of the tract exhibits a mix of primarily hardwood forests in the vicinity of the drainages and mixed second growth forests elsewhere.

[1] A "degree day" is a measurement of heating requirement. It represents the difference between each day's mean temperature and 65°F, the temperature below which houses are assumed to need heat. For example, if a winter's day mean temperature (highest + lowest + 2) equals 45°, then its degree-day total for that day would be 20 degree days.

The vegetation found on the tract today has been completely altered from what was there both in the mid-nineteenth century and during the early twentieth century. Even as late as 1970 the currently fallow tract was wooded, although it appears larger portions of the tract may have been cultivated earlier in the century.

PREHISTORIC AND HISTORIC OVERVIEW

Previous Research

The Piedmont has been the focus of considerable archaeological research. Derting et al. (1991), for example, cite 101 studies specified to Greenville County prior to 1991. Two-thirds of these (66) are associated with highway projects, eight represent sewer improvements, two are other types of compliance projects, and the remaining five projects represent various other types of non-compliance related projects. Consequently, while there is no denying that much work has been done in the county, relatively little of it involves significant research.

As a result, there is no single synthesis of the area's archaeology. Perhaps the most thorough overview specific to the area is the survey of the Laurens-Anderson highway connector (Goodyear et al. 1979). In this study, the bulk of the prehistoric sites were low density Archaic Period lithic scatters found in the uplands along the larger streams. This provides a basic model for site location which is largely supported by the work of Rodeffer et al. (1979) in nearby Greenwood County where reconnaissance level studies identified 358 archaeological sites. Of these, 295 contained prehistoric components, while 167 contained historic components.

In addition, the Paleoindian and Early Archaic is carefully explored by a variety of authors in an edited volume by Anderson and Sassaman (1996). These same researchers have also explored the Middle and Late Archaic (Sassaman and Anderson 1994). The Woodland and Mississippian is less well researched for the Piedmont, although Anderson (1994) does provide a generalized overview.

Historic site location is more difficult to gauge given the sparsity of work in the area. In general, researchers have found in neighboring areas the earliest occupations were located on rivers, but as the eighteenth century progressed, creeks were also a focus of settlement. During the nineteenth century settlement became more road oriented (see Brooks and Crass 1991).

Trinkley et al. (1995:99-159) provide a detailed overview of Greenville archaeology, the temporal periods, the types of sites anticipated for the county, and their projected locations. Readers are referred to that document for additional information.

As previously discussed, our review of the state site files at the South Carolina Institute of Archaeology and Anthropology failed to identify any previously recorded archaeological sites in the study tract or within the 1.0 mile APE. Likewise, no National Register sites were identified in the APE and no previous architectural surveys for the APE were found. One historic site, marked by a South Carolina Highway Historical Marker, was identified. Marker 23-3, erected in 1941 by the Behethland Butler Chapter DAR, marks the reputed location of the Battle of Great Cane Brake, about 0.5 mile north-northwest of the project site.

A Heritage Resources Management Plan for Greenville County, South Carolina (Trinkley et al. 1995) also reveals that there are three potential historic sites in the APE, including two bridges and the Great Cane Brake battle site (Figure 8).

Site 17 was identified in the South Carolina Department of Archives and History as the battle site on an undated highway reconnaissance map. It was at this site along the south side of Great Cane Brake Creek on December 22, 1775, that Tories under the command of Patrick Cunningham were defeated by a force of South Carolinians under William Thomson.

The location of this site has been contested for a number of years. Richardson observes that:

> Some place it far down Reedy river near the point where it

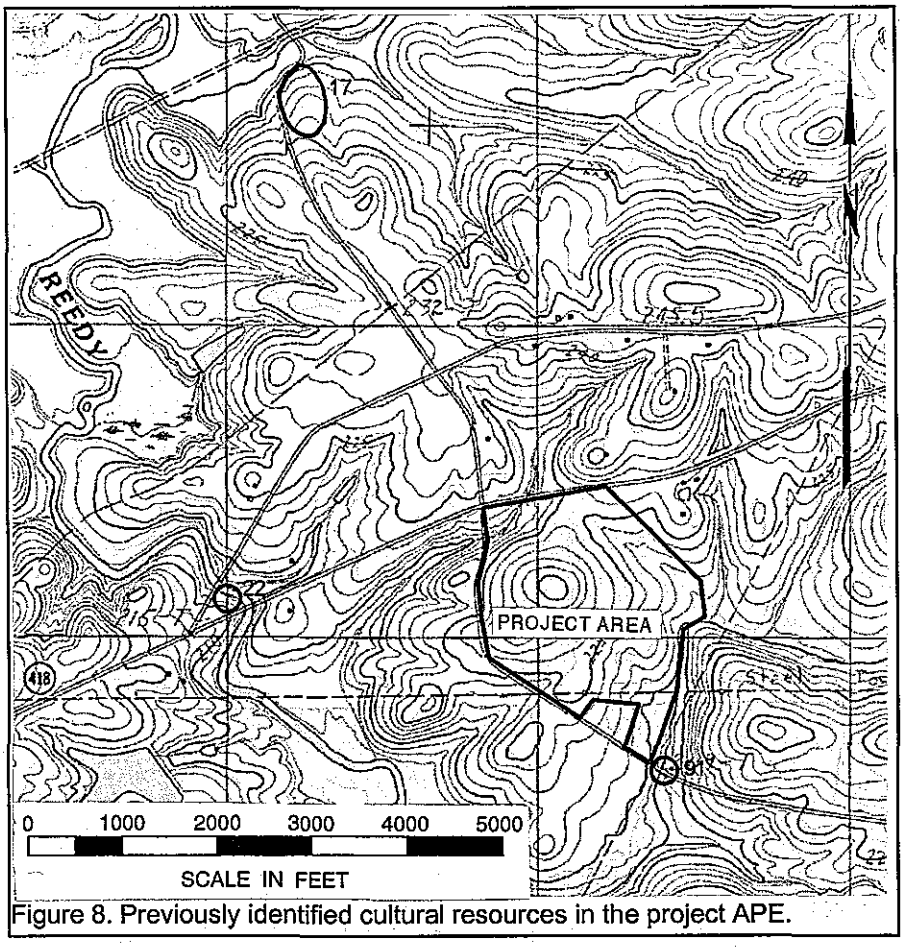

Figure 8. Previously identified cultural resources in the project APE.

empties into the Saluda, while McCrady shows it on his Revolutionary map as being only three or four miles below the present city of Greenville. But Dr. H.T. Cook, in his *Rambles in the Pee Dee Basin*, places it about 16 miles southeast of Greenville City. A careful consideration of the known facts, gathered from various sources, leads to the conclusion that Dr. Cook is correct, and that the battle of "Great Cane Break" was fought on what is now Greenville County soil. The early accounts locate it on Reedy river, four miles within the Indian country, and it is known that the Indian boundary line crossed Reedy river near Fork Shoals (Richardson 1930:41).

Richardson goes on to point out that several deeds make reference to "the Great Cane Break." While there may still be some debate, it appears that most agree it was in the vicinity of the historic marker, although no thorough investigation has been conducted.

Site 22 was identified as Jenkins Bridge on a wide variety of historic maps, including one which indicated that it was a steel truss bridge in ca. 1940. We found, however, that this bridge has been replaced by a modern concrete structure. Site 91, also a bridge, was reported to be a wood truss bridge in ca. 1940, but today it is also a modern concrete structure. Both of these bridges had been lost by the 1981 truss bridge survey, which found only one wooden covered bridge and seven metal truss bridges remaining in the county (Trinkley et al. 1995).

Prehistoric Overview

In the Carolina Piedmont, lithic scatters are the most common type of prehistoric site encountered. Goodyear et al. (1979:131-145) found that lithic scatter sites located in the inter-riverine Piedmont were geographically extensive and exhibited little artifact diversity. These sites have been interpreted as:

> limited or specialized activity sites which represent resource exploitation or other distinct

> functions. Nearly all investigators working in the Piedmont have related these sites to activities involving hunting, nut gathering, and procuring of lithic raw materials (Canouts and Goodyear n.d.:8).

Although the vast majority of these sites are located in eroded areas and exhibit little to no subsurface integrity, Canouts and Goodyear (1985) argue that they have analytical value. This value lies in their horizontal rather than vertical dimensions. They argue that:

> [f]uture investigators of upland site must effect broad-scale spatial analyses comparable to the temporal analyses effected through excavation of deeply stratified sites. Both endeavors are necessary, and neither is sufficient for the total understanding of Piedmont prehistory" (Canouts and Goodyear 1985: 193).

One observation that Canouts and Goodyear (1985) made is that lithic raw material ratios change through time. For instance, at the Gregg Shoals site in Elbert County, Georgia, the Early Archaic assemblage reflects greater use of non-local cryptocrystalline materials and the Late Archaic, greater use of non-quartz local material (see Tippitt and Marquardt 1981). Examination of changing use of lithic resources will help archaeologists better understand issues such as the extent of seasonal rounds, trade networks, and social organization. Clearly, the discussions by Canouts and Goodyear (1985) argue strongly for a higher regard for the "lowly" lithic scatter — a very common occurrence in the Piedmont.

Figure 9 provides an overview of the cultural sequence commonly found in the Carolina Piedmont.

Paleoindian Period

The Paleoindian period, lasting from 12,000 to 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977). The Paleoindian occupation, while widespread, does not appear to have been intensive. Points usually associated with this period include the Clovis and several variants, Suwannee, Simpson, and Dalton (Goodyear et al. 1989:36-38).

Unfortunately, little is known about Paleoindian subsistence strategies, settlement systems, or social organization. Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on the isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Very little work in the state has been able to focus on Paleoindian settlements because of the rarity of the site type. No evidence was found for Paleoindian occupation in the Laurens-Anderson inter-riverine area, which is not surprising since elsewhere in the state these sites are usually found clustered along major drainages and their tributaries which is interpreted by Michie (1977:124) to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna."

One site identified in the Sumter National Forest (Price 1992), in neighboring Laurens County, is believed to have a possible Paleoindian component (38LU317). It is situated on a ridge saddle adjacent to a spring which feeds into the Enoree River, located only about 0.3 miles to the north. This fits well with previous arguments that Paleoindian sites will be located adjacent to major drainages.

Anderson (1992:32) suggests that the comparatively low density of Paleoindian diagnostics in South Carolina may be because the state could have been on the edge of the ranges of groups centered in other areas. He suggests that permanent settlements elsewhere probably

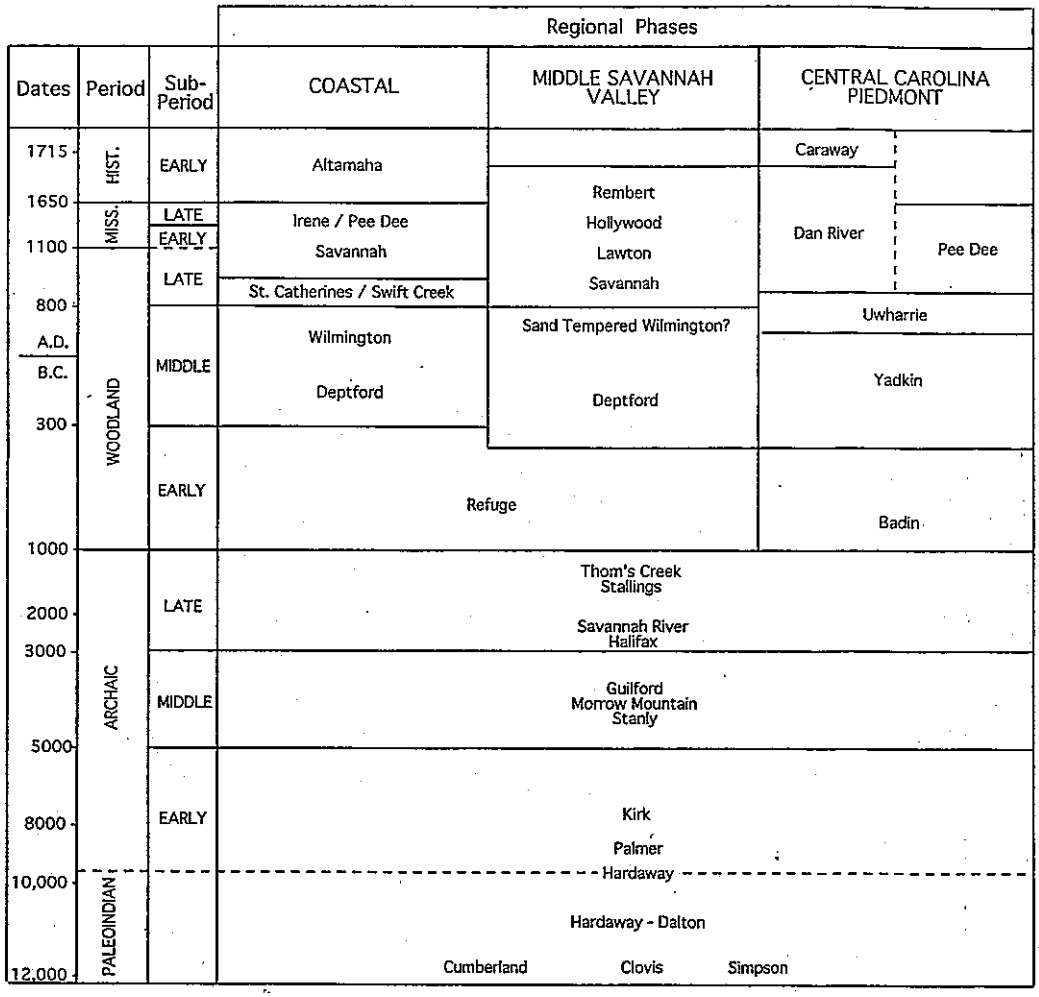

Figure 9. Cultural periods for South Carolina.

occurred later in the Paleoindian period, only when population levels had grown appreciably in these centers. This would help to explain the overlap in stylistic traditions (such as the Clovis, Suwannee, Simpson, and Dalton) observed in South Carolina which perhaps resulted from populations expanding outward from these centers.

Archaic Period

The Archaic period, which dates from 8000 to as late as 500 B.C. in the Piedmont, does not form a sharp break with the Paleoindian period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Archaic period assemblages,

characterized by corner-notched, side-notched, and broad stemmed projectile points, are common in the vicinity, although they rarely are found in good, well-preserved contexts (for a thorough discussion of the Early Archaic, see Anderson and Sassaman 1996, while Anderson and Joseph 1988 offer a review of prehistoric archaeology along the upper Savannah River).

Prehistoric sites in the Piedmont inter-riverine zones are for the most part characterized as "upland lithic scatters" (House and Wogaman 1978:xii). These sites are shallow deposits without stratigraphic definition, contain a diversity of artifacts, and are commonly disturbed by plowing and/or erosion (Canouts and Goodyear 1985; Trinkley and Caballero 1983:27).

Early Archaic

During the Laurens-Anderson study (Goodyear et al. 1979), four sites with Early Archaic components were identified. Each of these sites contained a single example of Dalton[1] points or probable Dalton preforms made of indigenous Piedmont quartz. The following Palmer phase was found to be very common in the area and was represented by 28 sites. While most of the specimens were manufactured from the local quartz, some were manufactured from Coastal Plain chert from the Flint River formation located in the lower coastal plain of South Carolina and Georgia. There were also examples of metavolcanic rhyolite from the Carolina Slate Belt and what may be "Ridge and Valley chert" from eastern Tennessee.

At these sites a wide range of tool types were identified including a large number of unifacial and flake tools believed to be associated with the Early Archaic occupation. Goodyear et al. (1979:197) found that while Early Archaic sites with unifaces were found throughout the corridor, sites on ridgetops which were large watershed divides produced higher counts. They believe that the large number of sites producing Palmer points is related to environmental changes at that time. The large diversity in lithic raw material provided information regarding their "mobility patterns and regions of interactions" (Goodyear et al. 1979:198).

Anderson and Hanson's (1988) band/macroband model of Early Archaic settlement was formulated primarily to evaluate data from the Savannah River basin. In the Savannah River Valley, settlement organization of the Early Archaic people was "characterized by the use of a logistically provisioned seasonal base camp or camps during the winter, and a series of short-term foraging camps throughout the remainder of the year" (Anderson 1992:36). During the early spring, the groups are believed to have moved toward the coast, then back into the upper coastal plain and piedmont during the later spring, summer, and early fall. During the winter they returned to their base camp incorporating some side trips to other drainages for aggregation events by groups from two or more different drainages. These aggregation sites are believed to have been located on Fall Line river terraces (Anderson 1989a:36). One example of a postulated base camp is the G.S. Lewis site at the Savannah River Site. This site is located on a ridge adjacent to the confluence of Upper Three Runs Creek and the Savannah River. Given this scenario for the Savannah River basin (which likely applies to other river basins), Early Archaic sites in the Piedmont were likely occupied from summer until fall and don't include aggregation sites. Anderson and Hanson (1988) place the Upper Piedmont in the Saluda/Broad macroband settlement system. At the band level, they proposed "co-residential population aggregates" consisting of 50 to 150 people which occupied and moved primarily within one drainage basin. They projected that individual macroband population was between 500 and 1500 people. They also formulated a spatial model for the distribution of individual bands over the South Atlantic Slope.

Anderson (1989b) notes that data from the Savannah River Site and the Richard B. Russell Reservoir "suggest that a decline in utilization of the Coastal Plain may have occurred at the same

[1] Some researchers (see, for instance, Anderson 1992) classify Dalton as Paleoindian while others (Goodyear et al. 1989) classify it as Archaic.

time as an increase in utilization of the Piedmont [and] may be a part of a trend noted in the terminal Early Archaic in the general region. Settlement patterning in any given area was thus likely shaped by a range of variables, such as local resource structure, as well as by more regional trends in climate, population density, and these patterns apparently changed appreciably over time" (Anderson 1992:39). Data from the Laurens-Anderson study and the Savannah River project suggests that inter-riverine sites will be found on hills between watershed divides and riverine sites will be located on knolls adjacent to a major confluence.

Middle Archaic

Morrow Mountain and Guilford points constituted the primary evidence for Middle Archaic (5000 to 3000 B.C.) occupation in the Laurens-Anderson corridor (Goodyear et al. 1979). Morrow Mountain constituted the vast bulk of these projectile points and were present in both the I and II varieties.[2] Over 95% of the 145 points were manufactured from the local quartz, which parallels other findings in Piedmont South Carolina. Guilford was not nearly as prominent and consisted of 35 finished specimens or preforms, all of which were manufactured from quartz.[3]

The Middle Archaic period was found to consist of the largest number of sites. In terms of geographic distribution, Goodyear et al. (1979) found that the Morrow Mountain phase was much like the Palmer phase, with sites occurring on ridges between watersheds. However, the almost complete reliance on local quartz separates the Morrow Mountain and Guilford phase sharply from the earlier Palmer phase. They suggest that "[t]he large number of Middle Archaic sites well dispersed through the inter-riverine areas and the abundant nature of chipped quartz remains on these sites suggest frequent movement and activity throughout the Piedmont of South Carolina" (Goodyear et al. 1979:207). Data from early reservoir projects (see, for example, Wauchope 1966) as well as inter-riverine observations by Caldwell (1954; 1958) and Coe (1952) made it clear that there were sharp contrasts between riverine and inter-riverine sites in terms of artifact diversity and density, and in the use of shellfish (Sassaman and Anderson 1994:134). With the advent of cultural resource management in the 1970s, additional data was available and further emphasized these differences. All of this data indicated that the largest and densest sites were located along large rivers, and that small, sparse sites were found throughout the uplands. While these differences were clear, what remained unclear was the relationship between riverine and inter-riverine sites in a settlement-subsistence system, and how, if at all, this system changed over time (Sassaman and Anderson 1994:135).

House and Ballenger studied this issue during their survey work on the proposed Interstate 77 project in 1976. They classified riverine zones of containing only the largest rivers while inter-riverine zones consisted of smaller rivers and streams. House and Ballenger (1976) argued that streams with a ranking of 3 or higher[4] contained resources that were not abundant in the uplands (fish, turtle, raccoon, etc.), whereas smaller streams had a higher density of deer and

[2] Coe (1964) describes Morrow Mountain I as a small triangular blade with a short pointed stem, while the Morrow Mountain II is described as a long narrow blade with a long tapered stem. While he describes them as different types, he notes that many people have chosen not distinguish between the two.

[3] Preforms represent an intermediate stage between flakes from secondary cores and quarry blades. Some are worked bifacially, although most are unifacial and still retain the platform and bulb of percussion. Quarry blades are usually bifacially worked and are made to allow easy transportation of lithic materials until the time it is needed to be made into a projectile point. Some researchers have used the terms preform and quarry blade interchangeably, meaning the bifacially worked ovate blade.

[4] According to the system, based on Strahler (1964) 1st order streams are the fingertip tributaries at the head of a stream and may either be year-round or seasonally flowing streams. A 2nd order stream is formed by the confluence of two 1st order streams. A 3rd order stream is formed by the confluence of two 2nd order streams, etc. This system requires that at least two streams of a given order be joined to form a stream of the next highest order. The main stem of a river will always have the highest order.

nut masts. The resulting archaeological assemblages from these distinct areas should, themselves, be distinct (House and Ballenger 1976; Sassaman and Anderson 1994). They divided their sites into habitation and extraction sites[5] using a lithic tool classification scheme that would allow functional sorting of the two site types. From the information gathered using this analysis, coupled with data on the seasonal availability of resources, they created a Middle and Late Archaic settlement model:

> involving spring and summer residence along major rivers; a move to seasonal base camps in upland creek valleys in September to take advantage of deer concentration in upland hardwood zones, with some exploitation of other resources as well; and then a return to riverine-located winter quarters with permanent houses in about December when the coldest months arrived, the deer rutting season came to an end, and the acorn mast in the hardwood forests began to be exhausted (House and Ballenger 1976:117).

The Windy Ridge site (House and Wogaman 1978), while fitting the expected upland site profile as proposed by House and Ballenger (1976), may have been used as a habitation site during the Middle Archaic. Other projects also complicated the model. Work in the Richard B. Russell Reservoir (Anderson and Schuldenrein 1985; Tippett and Marquardt 1981) examined a number of sites with Morrow Mountain components. Interestingly, none of these riverine sites produced denser or more diverse remains than did inter-riverine sites. This suggested that Middle Archaic people were not using the riverine and inter-riverine areas much differently in this part of the state (Sassaman and Anderson 1994:137).

Sassaman (1983) attempted to more closely examine Middle and Late Archaic settlement patterns by examining sites from a number of piedmont studies. He found that Middle Archaic settlement in the South Carolina Piedmont did not fit the riverine-inter-riverine model. This suggested that Middle Archaic people were much more mobile, perhaps moving residences every few weeks which fit Binford's (1980) definition of a foraging society. Binford (1980) proposed that foragers had high levels of residential mobility, moving camps often to take advantage of dispersed, but similar resource patches. Collectors stayed in one location longer, by sending out specialized work parties to exploit resources in widely dispersed and distinct resource patches. He believed that differences in environmental structure could be traced to large scale climactic factors. He further noted that a collector system could arise under any conditions that limited the ability of hunter-gatherers to relocate residences. During his work in the Haw River area of North Carolina, Cable (1982) argued that postglacial warming at the end of the Pleistocene led to increased vegetational homogeneity which encouraged foraging.[6]

Sassaman (1983) suggests that this indicates a large degree of homogeneity of the piedmont environments. They also had a high degree of social flexibility, allowing them to pick up and move when needed. This high level of mobility did not allow them to transport much material, which in turn, alleviated the need for elaborate or specialized tools to procure and process resources at locations distant from camp. Since quartz is practically everywhere in the piedmont, tools could be easily replaced and were expedient. The high mobility and the expediency of tools helps to explain the abundance of Middle Archaic sites in the piedmont without having to imply a population explosion. Sassaman called this model the

[5] An extraction site is an area where resources (such as fish, lithic raw material, etc.) were obtained and is often represented by lithic debitage and perhaps small camp sites. A habitation site is a seasonal or temporary camp where these resources were usually consumed, used, or worked.

[6] Since the vegetation was homogeneous and there were no concentrations of resources people moved from place to place foraging rather than settling near or in these resource concentrations.

"Adaptive Flexibility" model (Sassaman 1983; Sassaman and Anderson 1994).

Late Archaic

Savannah River Stemmed and Otarre[7] stemmed points are the primary indicators of Late Archaic settlement in the Laurens-Anderson study area. Ten Savannah River phase sites and seven Otarre phase sites were identified. Quartz tools, which were found in overwhelming abundance at earlier sites, consisted only of about 57% of the Savannah River assemblage. Other materials included "silicates, volcanic slate/argillite, and unknown igneous/metamorphic" (Goodyear et al. 1979:207). The Otarre assemblage reflected a trend away from igneous/metamorphic rock, with a concentration of quartz and siliceous materials. The incorporation of more types of lithic raw material as well as the fact that Late Archaic diagnostics are much fewer than Middle Archaic diagnostic artifacts indicates a sharp decrease in residential mobility.

Many of these Late Archaic sites produced fire cracked rock which was found on major ridges between watersheds. Goodyear et al. (1979:209-210) found that the inter-riverine picture of the Late Archaic contrasted quite sharply with river sites. Artifacts at riverine sites were diverse and included steatite vessels and netsinkers[8], ground stone axes, rock mortars and handstones, atlatl weights, and chipped stone drills. In the upland sites, the assemblage consists almost entirely of chipped stone bifaces and debitage. Purrington (1983) also noted this trend for the mountain region of North Carolina. At the Savannah River Plant, both riverine and upland sites contained a full range of tools, but no architectural features have been located.

Soapstone became an important lithic resource in the Late Archaic period for manufacturing of cooking vessels, and a number of soapstone quarries have been identified in Spartanburg and Cherokee counties (Ferguson 1976). Unfortunately, little is known about patterns in local soapstone use, although Elliott (1981) argues that soapstone exchange in the upcountry was facilitated by local reciprocal relationships. Soapstone was also probably used as a mechanism to maintain long distance relationships through long distance trade. Sassaman et al. state that:

> [c]ompared to sites in the upper and lower reaches of the Coastal Plain, a higher proportion of sites in the middle portion of the plain contain soapstone artifacts. This may indicate that soapstone distributions were not merely the result of distance-decay from sources, but were much more dependent on the social composition of exchange alliances (Sassaman et al. 1988:90).

For the Late Archaic, John White (1982) also applied a riverine/inter-riverine dichotomy. He demonstrated that riverine sites were much more dense and diverse than inter-riverine sites, but also identified the existence of diverse and sometimes dense assemblages at upland sites. He argued that they were habitation camps during periods of seasonal dispersal from riverine aggregation bases.

Although Steven Savage (1989) has proposed a "Late Archaic Landscape" model, a number of researchers (i.e. Anderson 1989a; Cable 1994; and Rafferty 1992) have noted that his study was seriously flawed by the "misappropriation of data from the Richard B. Russell survey" (Sassaman and Anderson 1994:142). The purpose of the work was to attempt to apply the locational methods of GIS to the analysis of Late Archaic social systems in the

[7] According to Oliver (1981) the Otarre type is contemporaneous with the Savannah River stemmed type and fall within the category of "Small Savannah River Stemmed".

[8] Sassaman (1991:87-88) states that "perforated and grooved objects are common items in Late Archaic assemblages of the Savannah River Valley. Both the grooved and perforated varieties have been referred to as "netsinkers", but the more common perforated slave was apparently used as a cooking stone."

Upper Savannah River Valley. However, he only chose to use early intensive survey data and ignored subsequent data from testing and excavation. In addition, he chose to ignore problems such as multicomponentcy and representativeness (Cable 1994). Although it was considered a noteworthy study since it was the first to use Geographic Information Systems (GIS) for the analysis of settlement distribution, "the errors detract from the potential value of Savage's approach" (Sassaman and Anderson 1994:142).

Woodland Period

The Woodland period begins, by definition, with the introduction of fired clay pottery about 2000 B.C. along the South Carolina coast and much later in the Carolina Piedmont, about 500 B.C. Regardless, the period from 2000 to 500 B.C. was a period of tremendous change.

The subsistence economy during this period was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish. Various calculations of the probable yield of deer, fish, and other food sources identified from some coastal sites indicate that sedentary life was not only possible, but probable. Further inland it seems likely that many Native American groups continued the previous established patterns of band mobility. These frequent moves would allow the groups to take advantage of various seasonal resources, such as shad and sturgeon in the spring, nut masts in the fall, and turkeys during the winter.

Early Woodland

Brooks and Hanson (1987) noted significant changes in the density and distribution of upland tributary sites during the Woodland period in the Steel Creek area of the Savannah River Plant. Brooks proposed that as tributary associated habitats became more productive with floodplain maturation that upland tributary terraces became areas of more permanent occupation. For the Savannah River area, the data suggested to Brooks that annual settlement ranges in the Early Woodland period were restricted to tributary watersheds (Sassaman et al. 1990:315).

Artifacts typical of the Early Woodland in the Upper Piedmont consist of Dunlap and Swannanoa ceramics (similar to the Kellog focus of Northern Georgia). The Dunlap series is characterized by a medium to coarse sand paste, fabric impressions, and vessels with a simple jar or cup form. The Swannanoa ceramics, with heavy crushed quartz temper, are cord marked or fabric impressed conoidal jars and simple bowls. Other surface treatments consist of simple stamping, check stamping, and smoothed plain (Keel 1976:230). Early Woodland projectile point types consist of Savannah River Stemmed (and its variants) and Swannanoa Stemmed.

Land use during the Early Woodland period in some areas of the Piedmont suggests extensive use of the inter-riverine zone. Two sites (one in Greenville County and one in Laurens County) contained dense remains and were located on the south face of a slope adjacent to springs. Goodyear et al. (1979:230) suggest that these sites "reflect a fall-winter occupation period with subsistence activities primarily related to nut gathering and deer hunting. If these two sites in fact represent fall-winter base camps it would represent a strong break with previous Archaic systems and their settlement strategies for exploiting inter-riverine biotic resources". Based on these previous studies, Early Woodland sites are most likely to be found adjacent to springs or the upland terraces of tributaries.

Middle Woodland

The Middle Woodland period is found "virtually lacking" in the Laurens-Anderson inter-riverine zone. One densely occupied site in adjacent Laurens County was found in an unusually large floodplain of a rank 2 stream. Goodyear et al. state that:

> [g]iven the habitation like character of this site, plus the large number of simple stamped bearing floodplain sites along larger streams such as the Reedy River, it is tempting to see agriculture playing a role in the apparent re-orientation to flood-

> plain environments during the middle Woodland period in the Piedmont environment. In this regard, the middle Woodland period sites and their locations would seem to presage the late prehistoric Mississippian period pattern during the latter, where large agriculturally related villages were constructed along fertile stretches of floodplain (Goodyear et al. 1979:230-231).

This new pattern is also reflected in the Savannah River Valley where Savannah terrace sites at the mouth of Upper Three Runs Creek were being occupied again for intensive settlement. Midden accumulations at several sites indicate long term occupation or repeated occupations of these sites by relatively large groups (Sassaman et al. 1990:315).

Pottery typical of the Middle Woodland in the Upper Piedmont consists of the Pigeon and Cartersville series. Pigeon is quartz tempered with surface treatments of check stamping, simple stamping, and brushing. The Cartersville type is characterized by sand or grit paste with the primary surface treatment being cordmarking, although there are also check stamped and simple stamped varieties. The Cartersville series is thought to be closely related to the Deptford series on the Coast. Anderson and Schuldenrein (1985:720) suggest that Cartersville continues well into the Late Woodland period. Projectile points typically found in association with these pottery are the Pigeon Side Notched and Corner Notched types.

Testing at 38LU107 (Wood and Gresham 1981) demonstrated that one of the most intensive occupations of this multicomponent site was during the Middle Woodland period. This site is located on a knoll adjacent to South Rabon Creek, near its confluence with North Rabon Creek. A number of features were encountered including a large, deep pit, post holes, and a stone hearth. This indicated that even sites on plowed knolls can and do produce subsurface features.

Since the Middle Woodland period reflects a new pattern of settlement, questions regarding how quickly this change occurred and how the transition to horticulture affected their material culture should be examined. Clearly, this change did not occur over night and perhaps examination of radiocarbon dates from upland and riverine sites during this transition period will begin to clarify questions regarding change in lifeways.

Late Woodland

Small triangular points which are generally believed to be diagnostic of the Late Woodland and Mississippian periods consisted of 12 examples in the Laurens-Anderson study. Ten of these were manufactured from quartz while the other two where manufactured from either rhyolite or a Piedmont silicate. These projectile points were typed as "Mississippian triangulars" and included what they believed were Uwharrie or Pee Dee Triangular types and the Hamilton Incurvate Triangular type. Napier and Connestee Series pottery are typical Late Woodland types for the Upper Piedmont region. The Napier series is a fine sand tempered ware with fine complicated stamped designs. The Connestee series is a thin walled sand tempered ware with brushed or simple stamped surface decorations. There are also cordmarked, check stamped, fabric impressed, and plain varieties (Trinkley 1990).

According to Sassaman et al. (1990:317) Late Woodland occupations in the Savannah River Valley consisted of small habitation sites along all available terrace locations of both tributaries and the Savannah River. This increasing use of low-lying terraces suggests the increased exploitation of floodplain habitats, perhaps including maize agriculture, although no direct evidence has yet been found at the Savannah River Site.

Keel (1976) reported on the Garden Creek Mound No. 3 which contained a dominant Connestee component based on George Heye's 1915 examination of the mound. Later work at Garden Creek Mound No. 2 examined a portion of a village with a large quantity of Connestee remains. A number of post holes were exposed revealing one discernable square house with

rounded corners measuring about 19 by 19 feet in outline. In addition, there were a number refuse pits and hearths. The hearths included both rock filled and surface hearths. There were also a number of burial pits (see Keel 1976:99). It is likely that Connestee sites in the Upper Piedmont will contain similar features.

Mississippian Period

The South Appalachian Mississippian period, from about A.D. 1100 to A.D. 1640 is the most elaborate level of culture attained by the native inhabitants and is followed by cultural disintegration brought about largely by European disease.[9] The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers.

In the Upper Piedmont, Mississippian pottery includes the Pisgah and Qualla series. Pisgah ceramics are tempered with unmodified river sand, although some earlier examples contain both river sand and crushed quartz. It is decorated with complicated stamping, check stamping and ladder-like rectilinear patterns (Dickens 1970; Holden 1966). It should be noted that the Qualla series extends well into the historic period (ca.1500-1908) and is characterized by complicated stamping and bold incising. Other types described by Egloff (1967) include burnished, plain, check stamped, cord marked, and corncob impressed. At Tuckasegee brushed examples were also identified (Keel 1976). Other artifacts associated with the Mississippian period include triangular projectile points, flake scrapers, microtools, gravers, perforators, drill, ground stone objects (celts, pipes, and discoidals), and worked shell and mica (Keel 1976).

Very little evidence of Mississippian period occupation was found in the Laurens-Anderson inter-riverine survey area which is not surprising given the focus on riverine resources during this time period. Very little evidence of Mississippian occupation has been documented at the Savannah River Plant and no formal settlement-subsistence model has been created for this area (Sassaman et al. 1990:317). However, Anderson (1994) has provided a detailed examination of evidence for political change at Mississippian sites in the Savannah River Valley and should be consulted for more information.

Excavations at large Mississippian sites in the Upper Piedmont include work at the I.C. Few site which was examined as a part of the Keowee-Toxaway Reservoir project sponsored by Duke Power Company (Grange 1972). Simpson's Field (38AN8) on the Savannah River was also investigated during the Richard B. Russell Reservoir studies (Wood et al. 1986). Work at the Chauga site (38OC47) in nearby Oconee County evidenced occupation in the Early and Late Mississippian period. Ten stages of mound building were found at the site along with burials and palisades. There is evidence for increasing impoverishment of the residents through time, since burials associated with the latest phases of mound building contained fewer grave goods than earlier phases in both the occupation during the Early Mississippian and the Late Mississippian (Anderson 1994:303-305). Homes Hogue Wilson (1986) examined burials from the Warren Wilson site in western North Carolina and provided some preliminary conclusions regarding social structure based on location of burials according to age and sex. For instance, she found more males than females were buried under structure floors. These males included primarily those under 25 or over 35 years old. She also found that individuals buried inside of structures were more likely to have burial goods than those buried in public areas. Burial feature types included pit burials, side-chambered burials, and central-chambered burials. Studies such as this can give great insight into the social organization of prehistoric societies.

The largest amount of regional work has taken place in the North Carolina mountains at sites such as Tuckasegee, Garden Creek, and Warren Wilson. At Tuckasegee a possible town house was uncovered measuring about 23 feet in

[9] Small pox was a major cause of death to a large number of Native Americans during the historic period. The smallpox epidemics of 1734 and 1783 reportedly killed half of the Cherokee population (Hatley 1993).

diameter with a central hearth (Keel 1976). At Warren Wilson several roughly square structures were uncovered and they all measured on the average about 21 feet square. Burials were common inside of these houses and pit features were abundant. Artifacts at the Warren Wilson site included ceramics from the Swannanoa series up through the Pisgah series. (Dickens 1970).

Historical Synopsis and Context

Historical accounts of the territory encompassing the Piedmont began with the DeSoto expedition in 1540 (Swanton 1946). This area, referred to as the "Up Country" or "Back Country" interchangeably, was recognized by the Indians and the early settlers to be the hunting grounds of the Lower Cherokee (Logan 1859:6). In these early years the principal source of interaction between the European settlers and the Cherokee involved a loosely organized trading network.

After the establishment of South Carolina as a British province in 1670, organization and delineation into more manageable territorial units began. In 1682, the Proprietors sectioned the new province into four counties. Present Greenville County was included in the largest of these, Colleton County, which remained as Indian land until 1776 (Kennedy 1940:34). A further refinement of boundaries in 1769 saw the creation of the Ninety Six District, although Greenville (along with Pickens, Oconee, and Anderson counties) was still considered part of the Cherokee Lands. It was not until 1786 that Greenville County, taken from the Cherokee during the American Revolution, was created.

The 1755 treaty between the Cherokee and Governor James Glen ceded nearly half of the territory of present South Carolina to the whites (Mills 1972:604 [1826]). An early and sparse influx of settlers from the north was composed mainly of cattlemen and Indian traders. These semi-permanent settlements were concentrated along the streams and rivers where land was both productive and easily cleared. Cattlemen constructed temporary "cowpens" and planted small sections of corn, grains, and produce for home consumption. Mills (1972:571-572 [1826]) reports that one of the earliest settlers of Greenville was Richard Pearis or Paris. Pearis operated a trading post and grist mill on the Reedy River overlooking a 15-foot fall, near the present Bowater Company building on Camperdown Way in downtown Greenville (see also Building Conservation Technology 1981).

After the initial settlements of the 1750s the white population of the Up Country did not increase significantly until 1761, with the expulsion of the Native American population at the end of the Cherokee War. This created a second wave of immigration and settlement, spearheaded by farmers from the northern colonies of North Carolina, Virginia, Maryland, and Pennsylvania. These settlers developed a self-sufficient economy based on planting flax, tobacco, corn, wheat, and oats, and raising cattle and hogs for their own use. Slaves were relatively uncommon until the early 1800s.

In this early period of European settlement there was little connection with the legal authorities on the coast (i.e., Charleston), leaving the Up County largely autonomous. This led to the emergence of the Regulator Movement of the 1760s, a vigilante organization which attempted to maintain order and provide security through a system of courts and offices (Racine 1980:13). By the eve of the Revolution, two-thirds of the South Carolina population lived in the Up Country (Racine 1980:14).

By the onset of the American Revolution, the population of the Carolina Up Country was quite diverse in its ethnic, religious, and political backgrounds. These differences seemed to localize the hostilities between Whigs and Tories living side by side. Pearis, an avid Tory, lost his mill and home to Whig sympathizers, although the county saw relatively few skirmishes. In fact, the only two events of note were at the "Great Cane Break" on December 22, 1775, and at the headwater of the Tyger River in November 1781 (Lipscomb 1991).

The engagement at "the Brake of Canes" represents the culmination of what has become

known as the "Snow Campaign." In early December 1775 the patriot leaders in South Carolina demanded an end to Loyalist activities in the Ninety Six District. Three thousand men were placed under the command of Colonel Richard Richardson and they set off for the Up Country. By December 12 they captured Richard Pearis and eight other Tory leaders. By December 21 Richardson's command had swelled to 5,000 troops and he sent 1,300, under the command of Colonel William Thomson, to pursue other Loyalists into Indian Territory.

After marching all night they found the Loyalist camp at "the Brake of Canes," considered to be about 7 miles southwest of present-day Simpsonville. The patriots surrounded the camp and mounted a surprise attack at dawn on December 22. While the Loyalist leader Patrick Cunningham escaped, 130 prisoners were taken and marched back to the patriot camp (see Huff 1995:22-23).

While this temporarily ended the Loyalist threat in the region, the Cherokees continued to support the British and engaged in a long campaign against settlers in the area. In response, the Cherokee faced at least seven major offensives before the Revolutionary War was over. Each attack was similar to the previous, with each one further reducing Cherokee food reserves and population. Soconee, Keowee, Sugar Town, Estatoe, Tugaloo, Tamassee, Cheowee, and Eustaste were burned and fields full of crops were destroyed. Eventually the Cherokee will was broken and with only a handful of intact settlements the Cherokee sued for peace, signing two separate treaties.

In the first, signed on May 20, 1777 at DeWitt's Corners, the Cherokee surrendered nearly all their remaining territory in South Carolina, including the present counties of Greenville, Anderson, Pickens, and Oconee. A second treaty was signed on July 20, 1777 at the Long Island of the Holston. Here the Cherokee ceded everything they possessed east of the Blue Ridge, fulfilling the colonial South Carolina lust for land and driving the Cherokees (at least on paper) "beyond the mountains."

Though the end of the Revolutionary War brought few changes to the life of the Up Country farmers, a solid framework of social and political organization was beginning to emerge. In 1797 Lemuel J. Alston offered a 400 acre site for the Greenville County court house and the formal organization of the area began to be recognizable. The original village, called Pleasantburg, was largely an unsuccessful speculative venture on Alston's part. Perhaps embarrassed by the failed real estate venture and a political defeat, Alston in 1815 sold his 11,000 acre holdings to Vardry McBee and left the area (Building Conservation Technology 1981:11). Virtually all of the City of Greenville can be traced back to McBee's ownership during the early nineteenth century.

In 1790 the Piedmont, with 81,533 inhabitants, accounted for 32.7% of South Carolina's population. By 1800 the population of this area had increased to 120,805, an increase of 48.2% over the previous decade. One obvious reason, clearly, was the promise of good agricultural lands, by this time a rare commodity in the coastal region.

By 1826 Greenville was a thriving, if small, town:

> the village of Greenville . . . is beautifully situated on a plain, gently undulating. The Reedy river placidly leaves its southern borders previous to precipitating itself in a beautiful cascade, over an immense body of rocks [the site of Pearis' earlier mill]. The village is regularly laid out in squares, and is rapidly improving. It is the resort of much company in the summer, and several respectable and wealthy families have located themselves here on account of the salubrity of the climate. These have induced a degree of improvement, which promises to make Greenville one of the most considerable villages in the state . . . . The number of houses is about 70 . . . .(Mills

1972:572-573 [1826]).

Mills' *Atlas* reveals that while the SC 418 corridor represents one of the early roads in the region, there was not a great deal of settlement. What is noticeable, however, are the number of mills shown on the Reedy River and how settlements are largely confined to the major roads and, especially, crossings (Figure 10).

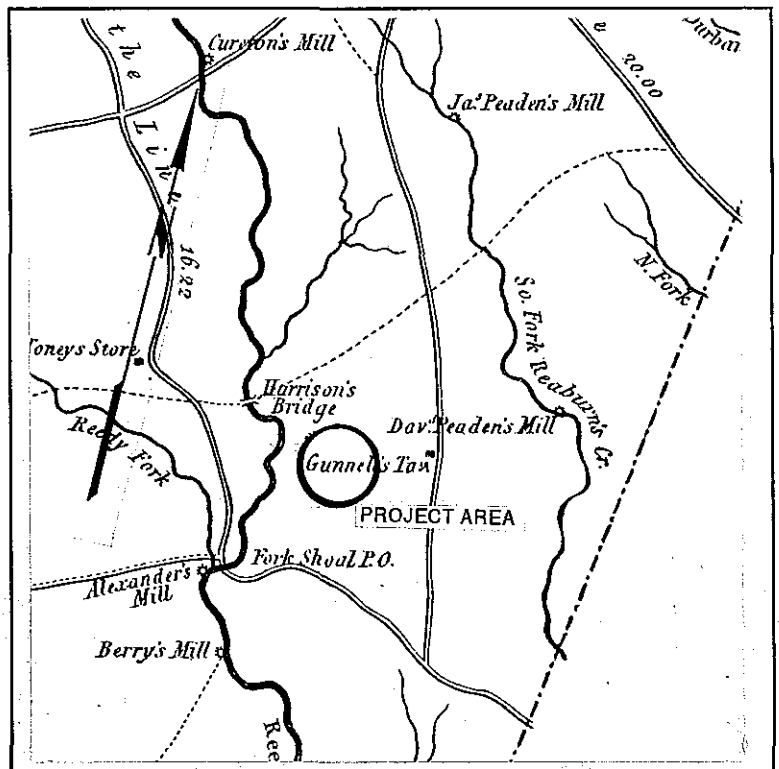

Figure 10. Portion of Mills' 1826 *Atlas* showing the project area.

Greenville County, by 1850, had 13,370 white inhabitants and 6,691 African American slaves, most operating the 1068 farms scattered across the county. There were 130,727 acres of improved farm land, or about 122 acres per farm. This compares favorably with adjacent Spartanburg County and is in excess of Pickens' 78 improved acres per farm (DeBow 1854:302-305).

James Henry Hammond's defense of the South before the United States Senate declared, "No, you dare not make war on cotton. No power on earth dares to make war upon it. Cotton is King." This sentiment was the culmination of nearly fifty years of agricultural and economic practices that led the South to the brink of destruction. The Up Country's participation in this economic roller coaster has been described in some detail by Ford (1988) and only a brief synopsis will be presented here.

Lacking a consistently profitable staple crop, the Up Country concentrated on the production of subsistence crops until the early 1800s with the introduction of the cotton gin and the rise of English textile mills, the out-growth of the industrial revolution. This early emphasis on food stuffs, while retarding upward mobility, had a lasting influence on the region, its economy, and its world view. Cotton spread quickly during the first decade of the 1800s and by 1811 the Up Country was exporting over 30 million pounds of short-staple cotton (Ford 1988:7). This cotton boom promoted tremendous growth in the region, a growth that even the yeomen farmers could participate in since it required little capital outlay and was subject to no particular economies of scale.

Examining the agricultural base of Greenville, it is clear that the bulk of the farms produced subsistence, rather than cash crops, until the Civil War — making Greenville unique in the region. While the county ranked seventh in the production of 11,074 bushels of rye and oats, it also ranked 26th in the production of cotton. Only Georgetown, Horry, and Pickens counties produced fewer than the 2452 bales from Greenville (DeBow 1854). The only significant cash crop produced by Greenville was tobacco. With 12,505 pounds reported, the county ranked third in tobacco production for 1850 (DeBow 1854). This continued a long tradition of tobacco cultivation, in spite of low yields, poor quality, and strong competition (see Trinkley and Hacker 1992 for additional details).

Ford cautions against the easy trap of

accepting the "dual-economy" hypothesis that views the Up Country as divided into planters raising cotton and yeoman farmers raising food stuffs and tobacco. Ford notes:

> by and large, Upcountry yeomen were not forced to make an all-or-nothing choice between commercial agriculture and subsistence farming, or between traditional mores and market values. Instead Upcountry yeomen made a set of crop-mix decisions each year, balancing their need for a sure and steady food supply with their desire for cotton profits, a cash income, and a higher standard of living (Ford 1988:72).

There remained an uneasy peace between yeoman and plantation owner in the Up Country. In order to maintain the political support of the yeoman majority, planters were forced to moderate their economic and legal power, molding themselves to the community mores and opinion.

Ford argues that the Up Country actively participated in Secession because of the "'country-republican' ideal of personal independence, given particular fortification by the use of black slaves as a mud-sill class" (Ford 1988:372). Yeomen and planters both rose to defend this common ideal.

The Civil War had little military impact on Greenville and no significant battles were fought in the County. The war did, however, change Greenville's history, destroying the basis of its wealth and creating in its place a system of tenancy — the hiring of farm laborers for a portion of the crop, a fixed amount of money, or both.

Immediately after the Civil War cotton prices peaked, causing many Southerners to plant cotton again, in the hope of recouping losses from the War. The single largest problem across the South, however, was labor. While some freedmen stayed on to work, others, apparently many others, left. An Englishman traveling through the South immediately after the war remarked that, "Thirty-seven thousand negroes, according to newspaper estimates, have left South Carolina already, traveling west" (quoted in Orser 1988:49).

The hiring of freedmen began immediately after the war, with variable results. The Freedmen's Bureau attempted to establish a system of wage labor, but the effort was largely tempered by the enactment of the Black Codes by the South Carolina Legislature in September 1865. These Codes allowed nominal freedom, while establishing a new kind of slavery, severely restricting the rights and freedoms of the black majority (see Orser 1988:50). Added to the Codes were oppressive contracts which reinforced the power of the plantation owner and degraded the freedom of the Blacks. The freedmen found power, however, in their ability to break their contracts and move to a new plantation, beginning a new contract. With the high price of cotton and the scarcity of labor, this mechanism caused tremendous agitation to the plantation owners.

Gradually owners turned away from wage labor contracts to two kinds of tenancy — sharecropping and renting. While very different, both succeeded in making land ownership very difficult, if not impossible, for the vast majority of Blacks. Sharecropping required the tenant to pay his landlord part of the crop produced, while renting required that he pay a fixed rent in either crops or money. In sharecropping the tenant supplied the labor and one-half of the fertilizer, the landlord supplied everything else -- land, house, seed, tools, work animals, animal feed, wood for fuel, and the other half of the needed fertilizer. In return the landlord received half of the crop at harvest. This system became known as "working on halves," and the tenants as "half hands," or "half tenants."

In share-renting, the landlord supplied the land, housing, and either one-quarter or one-third of the fertilizer costs. The tenant supplied the labor, animals, animal feed, tools, seed, and the remainder of the fertilizer. At harvest the crop was divided in proportion to the amount of fertilizer that each party supplied. A number of variations on this occurred, one of the most common being "third and fourth," where the landlord received one-fourth

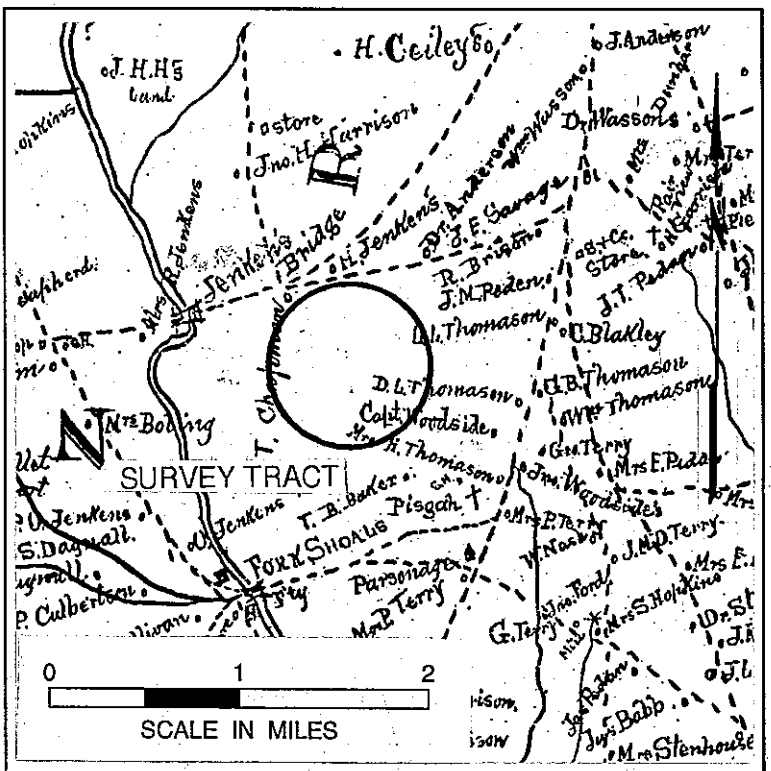

Figure 11. Portion of Kyzer's 1882 *Full Descriptive Map & Sketch of Greenville County* showing the study area.

of the cotton crop and one-third of all other crops. In cash-renting the landlord provided the land and housing, with the renter providing everything else and paying a fixed per-acre rent in cash.

Between 1880 and 1925 the number of owner-operated farms in the Piedmont increased by 35.3%, while the number of cash renters increased by 375.4% and the number of sharecroppers increased by 155.8%. More over, 1880 was the only year between 1880 and 1925 during which a majority of Piedmont farmers were owners, and this occurred in only three counties. Afterwards the population of owner-operators in the Piedmont remained at about 30% (Orser 1988:60).

In 1884 the labor system of Greenville County was described as encompassing either cropping or a rent system:

> Where money is paid the terms, strictly speaking, are monthly payments, but the custom that prevails most generally is a running account, with settlement at the end of the year (The News and Courier 1884:n.p.).

The account continued by noting that the cost of cotton production was about $40 per 500 pound bale. There were about 200 gins operating in Greenville County and the distance cotton would be hauled to a gin never exceeded 1½ miles. The report indicated that freedmen engaged in agriculture "rarely make more than a bare support and in the end they get into debt and never pay out" -- the legacy of poor agricultural training, the inability to obtain assistance, and the effect of Jim Crow laws (The News and Courier 1884:n.p.)

Figure 11 shows the spread of farms in the project area by the early 1880s. Nearby land owners include T. Chapman and H. Jenkins, although no settlements are shown in the study area.

Orser notes that the period from 1880 to 1920 is one of consistent agricultural expansion, with a concomitant increase in cotton production. This trend, however, changed between 1920 and 1925, when both the number of farms and the cotton production dramatically decreased (Orser 1988:69). The causes of this reversal are at least two-fold: increasing Piedmont erosion and the introduction of the boll weevil (Orser 1988:77).

In Greenville, however, the news was not planting cotton, but rather weaving it into "golden" yarns and fabrics. In 1872 Greenville, recovering from the economic collapse of the Civil War, received its second railroad. Between 1874 and 1875 the Camperdown Mill was built. By 1888 there were eight cotton mills in Greenville County using both steam and water power, with capital of nearly a million dollars and an annual output in excess of two million dollars. These included the

Piedmont Mill (on the Saluda River about 10 miles south of Greenville), Camperdown Mills 1 and 2 (located in Greenville), Batesville (on Rocky Creek about 10 miles east of Greenville), Pelham Mill (on the Enoree River 11 miles east of Greenville), Reedy River Factory (on the Reedy River 6 miles southeast of Greenville), Fork Shoals Factory (on the Reedy River 12 miles south of Greenville), and Huguenot Mills (on the Reedy River in Greenville). Even at this early date the focus was on expanding the textile base of the county:

> there is hope of the material advancement of the county by the development of the many fine water powers along the streams of the county that are standing invitations to capitalists who desire to invest in manufacturing enterprises (The News and Courier 1884:n.p.).

A historian clearly expresses the fervor which accompanied cotton mills:

> The "Cotton Mill Campaign" of the 1880s approached the status of a religious crusade, especially in the Carolina piedmont towns along the northern-owned Southern Railway: Charlotte, Greenville, and Spartanburg, among the more prominent participants in the "Campaign." "Next to God, what this town needs is a cotton mill," bellowed one Piedmont preacher, and a Salisbury, North Carolina, evangelist informed his listeners that "the establishment of a cotton mill would be the most Christian act" they could perform. Southerners evidently took heed; by 1900, one half of the South's looms were within a hundred mile radius of Charlotte, and the total number of looms in the South grew from 11,900 to 110,000 between 1880 and 1900 (Goldfield 1982:123-124).

The collective hope was that heavy investment in cotton mills would provide the jobs that Greenville (and other counties) so desperately needed, more effectively use the region's primary agricultural product (cotton), and would draw producers in related manufacturing and service fields to the region. In turn, the rapid urbanization brought about by the concentration of workers would create or increase the demand for locally made goods, as well as for agricultural, dairy, and meat products — all resulting in a healthier economic climate and prosperity — at least for the wealthy.

The social environment of the Piedmont contributed to the distinctive character of its industrialization, especially at its mills. Because mills were often constructed either in rural areas, or in areas which were not yet able to support truly urban growth, the mill owners had to provide housing for the workers. This, coupled with other aspects of "welfare work" were intended to attract workers to the mills from the countryside. It is

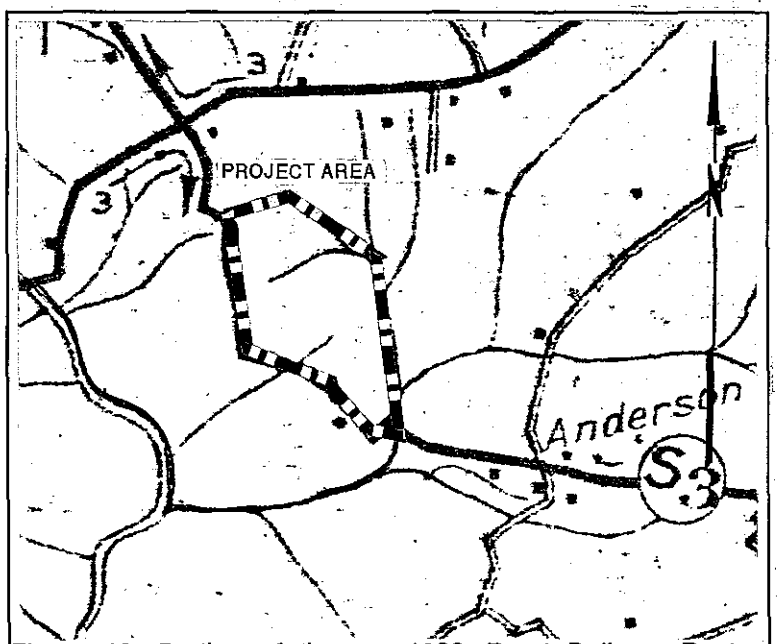

Figure 12. Portion of the ca. 1923 *Rural Delivery Routes, Greenville County, S.C.*, prepared by the Post Office Department, showing the study tract.

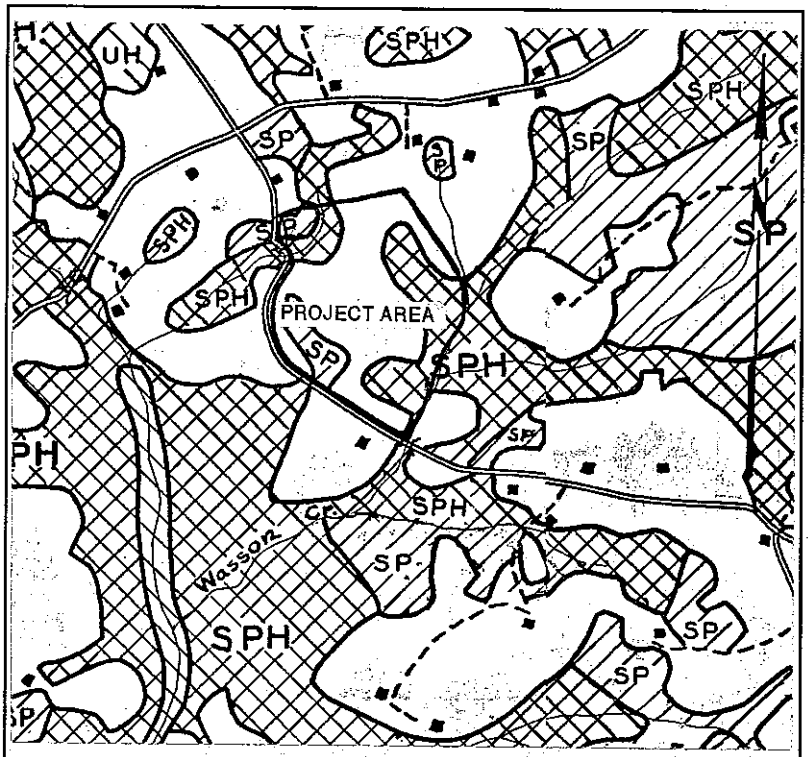

Figure 13. Portion of the 1939 Civilian Conservation Corp *Timber Type Map — Portion of Greenville County, SC* (sheets 9 and 10) showing the project area.

whole) remained rural and agrarian. For example, in 1900 only 4% of the people were employed in manufacturing jobs, the remainder were largely rural and agrarian, steadfastly maintaining their ties to earlier times.

By the 1920s there are several maps of the project area, including the 1921 produced with the Greenville County Soil Survey and the ca. 1923 *Rural Delivery Routes, Greenville County, S.C.*, produced by the Post Office Department. This latter map, shown as Figure 12, reveals that the modern alignment of SC 418 was not yet present and that instead Jenkins Bridge Road (which follows the ridge line far more closely than modern-day SC 418) was the main road through the area. More importantly, it reveals that there were no settlements in the project area.

ironic that the relative isolation of Southern mills, when compared to their Northern counterparts, is what created the comprehensive pattern of paternalism which, in turn, assisted the owners in thwarting unionization. Also beneficial was the threat of black labor, just as effective to break unionization efforts in the early twentieth century as it was to control poor whites in the antebellum.

More significantly, the process "delayed the development of a skilled and literate non-farm labor force, an essential resource for the attraction of high-wage, capital-intensive industry" (Oates 1989:730). In spite of the pervasiveness of the textile industry, it is important to realize that South Carolina (as well as the South as a

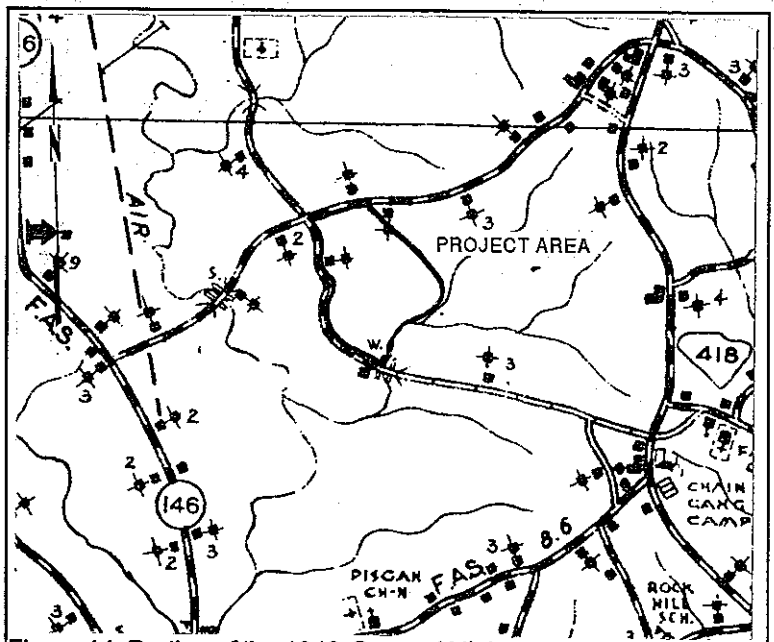

Figure 14. Portion of the 1940 *General Highway and Transportation Map of Greenville County* showing the project area.

In 1939 the CCC produced a timber map of Greenville County (Figure 13). This map reveals that Jenkins Bridge Road is still the only route through the area. Woodside Road is also on a somewhat different alignment, although generally in the same location. The tract is shown as primarily agricultural land, with a small area of pine hardwoods in the northwest corner of the parcel, while the southeast there were stands of shortleaf pine. The 1940 *General Highway and Transportation Map of Greenville County* reveals an identical road setting. Both maps indicate that there was no settlement on the tract.

METHODS

Archaeological Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100 foot intervals along transects spaced 100 feet apart. All soil would be screened through ¼-inch mesh, with each test numbered sequentially by transect. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1 foot or until clay subsoil was encountered. All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered. A total number of 431 shovel tests were excavated along 27 transects.

Should sites (defined by the presence of two or more artifacts from either surface survey or shovel tests within a 25 feet area) be identified, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at 25 to 50 feet intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

These proposed techniques were implemented with no significant modifications. A series of 27 transects were established running north to south along Woodside Road. Individual shovel tests were numbered from west to east along these transects. Much of the area had been logged prior to the survey, resulting in open, thin woods and surface visibility of about 30 to 50%. The topography in this area was extensively rolling with only one distinct ridge top which had been heavily eroded. Throughout the shovel tests revealed red clay subsoil within 0.3 to 0.6 foot of the surface, indicating extensive loss of soil.

Site locations were identified using a Global Positioning System for the recordation of the UTMs. The GPS positions were taken with a Garmin GPS 12XL rover that tracks up to twelve satellites, each with a separate channel that is continuously being read. The benefit of parallel channel receivers is their improved sensitivity and ability to obtain and hold a satellite lock in difficult situations, such as in forests or urban environments where signal obstruction is a frequent problem. This was a vital consideration for the study area.

GPS accuracy is generally affected by a number of sources of potential error, including errors with satellite clocks, multipathing, and selective availability. Satellite clock errors can occur when the satellite's clock is off by as little as a millisecond, or when a slightly-askew orbit results in a distance error. Multipathing occurs when the signal bounces off trees, chainlink fences, or bodies of water. Multipathing probably did not occur during this survey due to the cleared area where the artifact was found. The source of most extreme GPS errors is selective availability (SA), which as been turned off by the Department of Defense.

Architectural Survey

As previously discussed, given the nature of this project, we elected to use a 1.0 mile area of potential effect (APE). The architectural survey recorded buildings, sites, structures, and objects which appeared to have been constructed before 1950. Typical of such projects, this survey recorded only those which "have kept their integrity" (Anonymous n.d.:4).

For each identified resource a Statewide Survey Site Form was completed and up to two representative photographs were taken.

Permanent control numbers were assigned by the Survey Staff of the S.C. Department of Archives and History at the conclusion of the study. The Site Forms for the resources identified during this study have been submitted to the client for eventual submission to the S.C. Department of Archives and History.

The survey was conducted by driving the public roads (typically county or state secondary roads) in the APE. The roads included SC 418, Woodside Road (C-18), South Harrison Branch Road, Jenkins Bridge Road, and several smaller county roads including C-45 (Kimble Road) and C-46 (Wasson Way).

As previously discussed, Greenville County has not received a comprehensive architectural survey, although Chicora Foundation has conducted extensive cartographic research, identifying 3,164 sites in the county (Trinkley et al. 1995). Consequently there were three sites identified in the APE — the Great Cane Break Revolutionary War battle site and two bridges. As a result, our investigations consisted of both visiting these potential sites, as well as looking for any structures which might be 50 years old that retained integrity.

The background research on individual properties was more limited than is the case on county-wide local history surveys. We collected all of the information readily available to us in the field. In other words, where we found residents willing to discuss their property, we took advantage of this to collect additional information. We did not, however, pursue individuals who were not at home, attempt to make contact with others in the area, or aggressively seek out property owners. We did not conduct deed research, nor did we search newspaper archives for property-specific citations.

Site Evaluation

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead federal agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data

sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;

- identification of the historic context applicable to the site, providing a framework for the evaluative process;

- identification of the important research questions the site might be able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and

- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered. As a result, some aspects of the evaluative process have been summarized, but we have tried to focus on each archaeological site's ability to address significant research topics within the context of its available data sets.

For architectural sites the evaluative process was somewhat different. Given the relatively limited architectural data available for most of the properties, we have focused on evaluating these sites using National Register Criterion C, focusing on the site's "distinctive characteristics." Key to this concept is the issue of integrity. This means that the property needs to have retained, essentially intact, its physical identity from the historic period.

Particular attention would be given to the integrity of design, workmanship, and materials. Design includes the organization of space, proportion, scale, technology, ornamentation, and materials. As *National Register Bulletin* 36 observes, "Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact" (Townsend et al. 1993:18). Workmanship is evidence of the artisan's labor and skill and can apply to either the entire property or to specific features of the property. Finally, materials — the physical items used on and in the property — are "of paramount importance under Criterion C" (Townsend et al. 1993:19). Integrity here is reflected by maintenance of the original material and avoidance of replacement materials.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site forms for the identified archaeological sites have been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes and photographic materials have been prepared for curation using archival standards and will be transferred to that agency as soon as the project is complete.

When applicable, analysis methods focused on occupations spans, likely functions of the various sites, and changes in raw material or ceramic preferences. With prehistoric sites, diagnostic lithics and/or pottery provide temporal information. The ceramics were compared to published type descriptions where available (such as Coe 1964).

Debitage categories might include primary (defined as flakes with 90% or more cortex), secondary (defined as having less than 90% cortex), or interior (defined as having no cortex). These categories, widely used, are briefly explained by Yohe (1996:54-56; for further

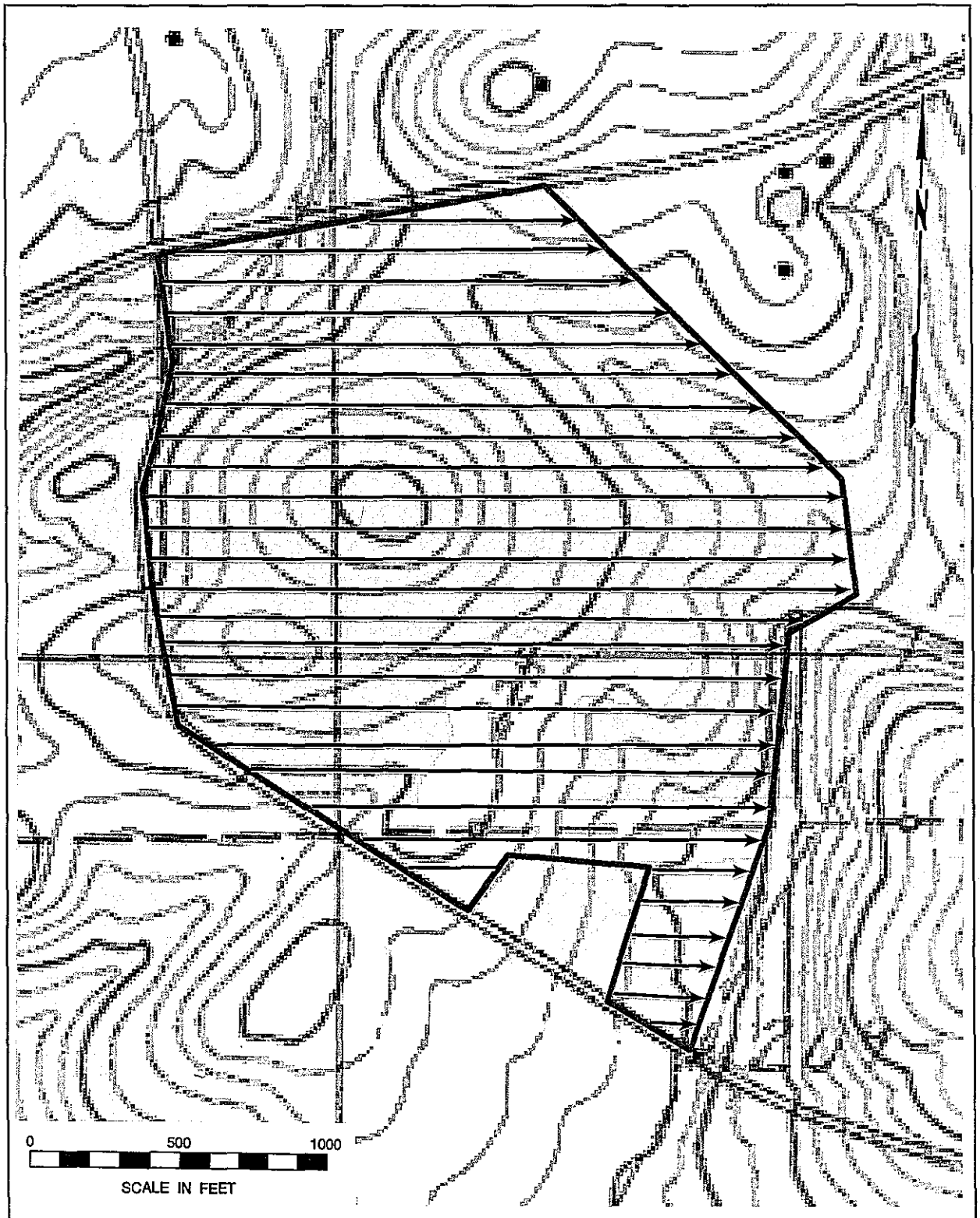

Figure 15. Transects established in the survey tract.

information see Blanton et al. 1986 or Oliver et al. 1986).

Shatter is often called chunks by other researchers. Either term is typically applied to angular pieces of debitage of various sizes. They lack observable striking platforms, dorsal and ventral faces, or other characteristics of flakes. These items are often, although not always, blocky and angular. Shatter is thought to have been produced in greatest numbers in the very earliest stages of tool production.

Points, also called hafted bifaces by some, are symmetrical, pointed bifaces which are modified for hafting. The diagnostic lithic remains were compared to published typological descriptions for the various projectile points such as Coe (1952, 1964), Oliver (1981), and South (1959). Items which can not be securely identified because of damage or which lack the often definitive basal sections are classified simply as bifaces.

At this survey level tools are defined very simply, being placed in broad morphological categories. Our laboratory methods, for example, define a biface as an artifact with flakes removed on both sides (not distinguishing between preforms, early stage reductions, and so forth); a core is a piece of raw material from which flakes have been removed; an end scraper is a blade tool with at least one convex end which exhibits a steep angle; a used flake is a chip of stone that was used as a tool, exhibiting edge damage or wear; and a side scraper is a flake tool in which one of the long edges was retouched to serve as the scraping edge. These definitions generally follow those provided by Yohe (1996).

RESULTS

This investigation, in spite of intensive shovel testing, identified only a single archaeological site — 38GR00 — an isolated find of a quartz biface. It is likely that the sparse remains are the result of two factors. One is certainly that much of the area is steeply sloping. This topography offered relatively few areas suitable for prehistoric occupation (and the historic background research suggested that no farm units were present in the project area). The second factor affecting archaeological recovery may be the extensive erosion suffered by the parcel. Throughout we found red clay exposed on the surface.

One of the most active avocational archaeologists in the region, Mr. Wes Breedlove, also failed to record any archaeological sites for this immediate vicinity — suggesting that historically the area has been a poor producer of archaeological remains.

In terms of historic sites we found that two of the three projected sites no longer exist. The third, while present, is being subdivided and sold. Within a mile of the project we found only two additional standing architectural sites — 4771247 and 4771248. The first was found in an area which is rapidly developing and no longer retains much of its rural character. Both structures have been significantly altered by the addition of vinyl siding and, in one case, the replacement of historic windows. Consequently, both structures have been significantly altered.

Archaeological Sites

Site **38GR00** is a surface find of a single prehistoric biface situated on a ridge nose at an elevation of about 730 feet AMSL. This isolated find is located about 2,000 feet east of Reedy River. Topography in the area is undulating, but the find is situated on fairly level area.

Typical vegetation in the area adjacent to the find consists of pines and mixed hardwoods, although the site itself is found in an existing transmission line right-of-way which had once been cleared, but is now overgrown with a mixture of weeds and briars. Portions of the right-of-way consisted of exposed red clay at the surface, where this particular artifact was found. A central UTM coordinate for 38GR00 is E382066 N3834850 (NAD27 datum) and the site area is accessible from Woodside Road, about 200 feet to the west.

Although shovel tests were completed at the originally proposed 100-foot intervals, only Transect 20 ran through the site area and no material was recovered from subsurface testing. Since the biface was found between two shovel tests (ST 2 and ST 3), close interval testing was performed at 25-foot between these original tests and additional shovel tests were excavated in a simple cruciform pattern until two consecutive negative tests were encountered. A total of nine tests were excavated and all tests were negative, revealing only heavily eroded Cataula soils. A reddish brown loamy clay was found at the surface to depths up to 0.5 foot, with red clay below.

As previously mentioned, the only specimen recovered was an undiagnostic quartz biface. This specimen, in the context of heavy erosion, cannot address significant research questions. As a result, we recommend the site not eligible. No additional management activities are necessary, pending the review of the lead agency and concurrence of the State Historic Preservation Office.

Architectural Sites

The two previously identified bridges in the APE were both found to have been replaced with modern concrete structures. The posited site of

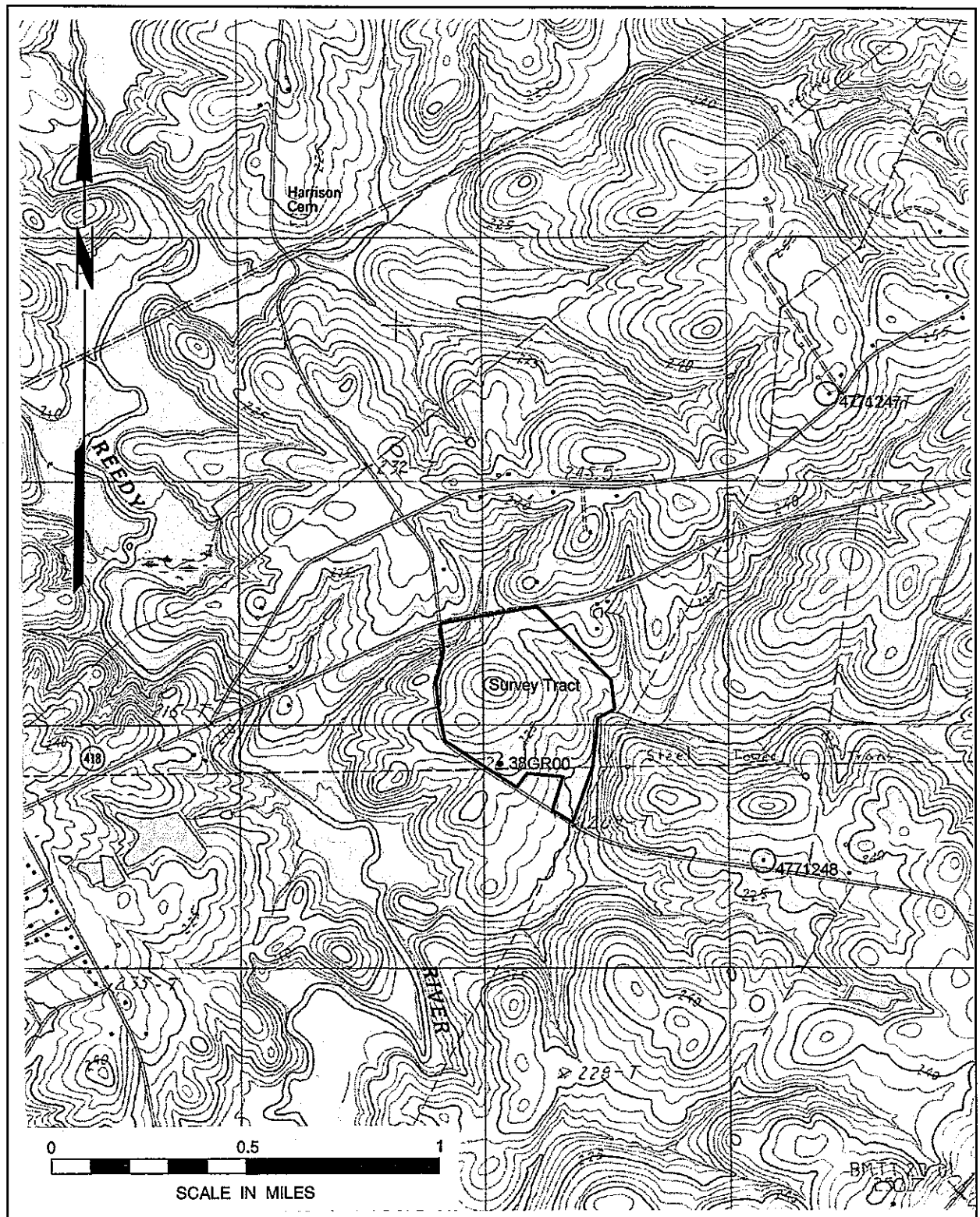

Figure 16. Sites identified on the survey tract and within the 1.0 mile APE.

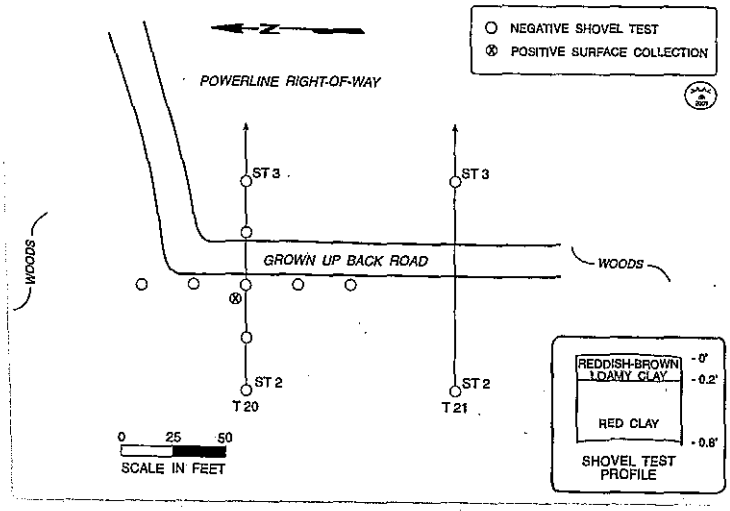

Figure 17. Sketch map and typical profile of site 38GR00.

mile to the south and the intervening topography and vegetation makes it unlikely that there will be any effect from the project.

The study, however, identified two previously unrecorded architectural sites within the project APE.

Structure 4771247 is situated on the northwest side of Jenkins Bridge Road, about 1.1 mile east of its junction with S. Harrison Bridge Road. This places it just at the edge of the 1.0 mile APE. The structure consists of a ca. 1920 two story I-house with a lateral gable metal roof. A one-story roof with a hip roof is found on the front and right elevations. The centered front door has both sidelights and a transom. To the rear of the structure is a wood frame shed with a metal end-to-front gable roof. Unfortunately the structure has suffered alteration, most significantly the application of vinyl siding and replacement balusters on the front porch. A rear addition, while not

the Battle of Great Cane Break is identified by a South Carolina Highway Historical Marker and is still a fairly rural area located west of S. Harrison Bridge Road, north of Jenkins Bridge Road (Figure 18). Unfortunately, it appears as though the general battle site is being subdivided for sale as individual lots, suggesting that there may have been a recent ownership change. While the area may be dramatically affected by this, the proposed Fork Shoals Energy project is about 0.5

Figure 18. Historic sign and setting for the Battle of Great Cane Break.

Figure 19. Structure 4771247, southeast (front) facade.

historic, is not as noticeable as these other modifications. This structure is not individually significant; in addition, the modifications have affected the structure's integrity. Consequently, it is recommended not eligible for inclusion on the National Register of Historic Places.

A second structure identified during this survey was 4771248, situated on the north side of Woodside Road (C-18), 1.3 miles east of its junction with SC 418. The ca. 1890 two story L-shaped structure has a hip roof. The cornice line of the main roof is divided with a wide band of trim. There is a one story porch centered over the entrance bay and has a decorated cornice. The porch is supported by simplified vernacular Doric columns. The size of the double windows suggests a relatively early date, but the original fabric has been replaced with vinyl clad sashes. There is a centered double door with sidelights and an elliptical fan light. The entablature has a design in the frieze over the first floor windows. The cladding, however, is synthetic.

While this is a very high style structure, but the replacement windows and vinyl siding have significantly altered its integrity. Consequently, the structure is recommended not eligible for inclusion on the National Register. Located about 0.5 mile southeast of the proposed project, it is unlikely that there will be any long-term visual affect, given the intervening topography and vegetation.

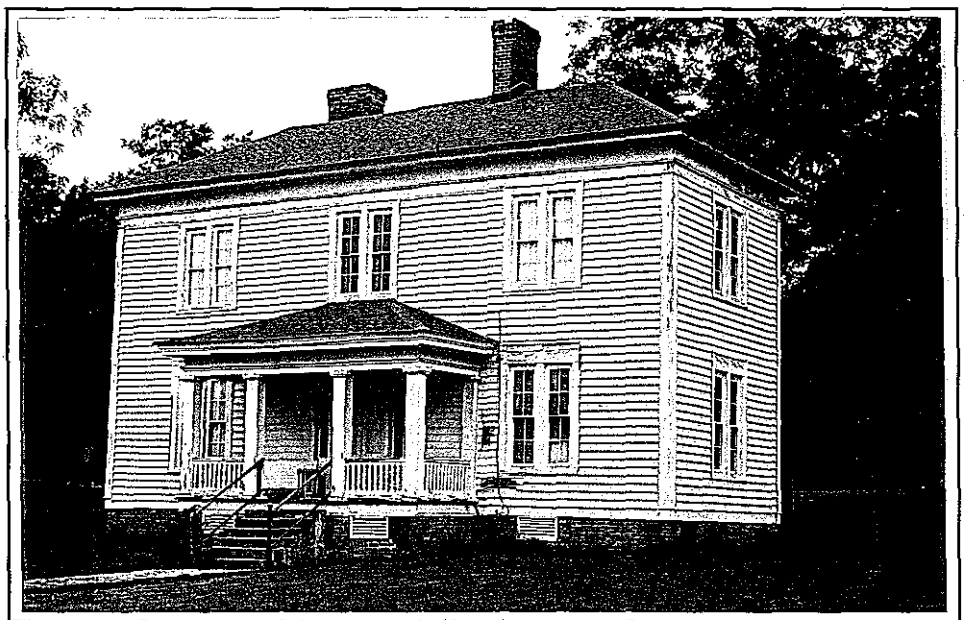

Figure 20. Structure 4771248, south (front) and east facades.

CONCLUSIONS

This study involved the examination of 98 acres of land for a proposed energy generation facility in southern Greenville County, South Carolina, just east of the Reedy River. Activities on the tract will include extensive clearing, grubbing, grading, construction of utilities and infrastructure, and erection of various facilities. At least one tower, of an undetermined height, will be erected. This study, conducted for Energy Consulting and Technology, Inc. (ECT), provides the results of that investigation and is intended to assist that organization comply with the historic preservation responsibilities associated with permitting the facility.

The survey consists of an area which historically has been under cultivation. Today most of the tract consists of pine or mixed hardwoods, although one relatively small area was found fallow. A 200-foot wide Duke Power transmission line corridor with steel towers crosses the southern third of the tract east-west, while a 68-foot Duke easement with H-frame wood poles crosses the southeastern tip of the parcel. The area exhibits rolling topography with many steep slopes. There are relatively few level areas within the study tract. Erosion is clearly visible throughout the survey tract and red clay soil is commonly exposed.

The survey did not incorporate any potentially necessary modifications or additions to existing powerline or gas corridors, nor were any potential secondary effects evaluated during this project.

There were no previously identified archaeological sites in the survey tract or the APE.

The archaeological survey, which included shovel testing, conducted at 100-foot intervals along transects placed at 100-foot intervals, revealed the extent of the erosion, with red clay subsoil usually found on the surface or within the upper 0.3 foot.

No archaeological sites were identified during the shovel testing, although a single isolated find, 38GR00, was recorded on a powerline easement as a result of pedestrian survey. Additional shovel testing in the area failed to reveal any other materials. The site is recommended not eligible for inclusion on the National Register of Historic Places and no additional management activities are recommended.

The surrounding areas are still fairly rural although there are a number of small developments under construction or completed to the north of the project site. There were no previously identified architectural sites in the project APE, although three sites were reported in the Greenville cartographic survey. One of the these, the Battle of Great Cane Break, is also marked by a South Carolina Highway Historical Marker. The vicinity of this site, at the edge of the 1.0 mile APE, is still fairly rural and undisturbed. At the time of this survey, however, it appears that the land is being subdivided and is for sale. Consequently, battle site is far more likely threatened by local development than by the proposed project.

The other two sites projected for the APE were both bridges — one a metal truss and the other a wood truss. Both bridges have been replaced by modern concrete structures.

The architectural survey identified two additional structures. Site 4771247 is a ca. 1920 I-house which is nearly a mile from the proposed project site. While long-term visual impact is unlikely, the structure has been extensively modified with the addition of vinyl siding and is recommended not eligible. The second structure, 4771248, is a ca. 1890 L-shaped high style house. Unfortunately, it has been extensively altered by vinyl siding and replacement vinyl clad windows. Consequently, it is also recommended not eligible

for inclusion on the National Register.

It is possible that archaeological remains may be encountered in the area during construction. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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